



State of Vermont

AGENCY OF NATURAL RESOURCES

Department of Fish and Wildlife
 Department of Environmental Conservation
 Department of Forests, Parks and Recreation

Fish & Wildlife Department

103 So. Main Street
 Waterbury VT 05671-0501
 Tel. 802-241-3715
 Fax 802-241-3295
 everett.marshall@state.vt.us

February 14, 2008

John Goodell
 SVE
 PO Box 1818
 Brattleboro VT 05302

Re: Petition of Entergy Nuclear Vermont Yankee, LCC, and Entergy Nuclear Operations, Inc.
 for its Certificates of Public Good and Approvals, for authority to continue operation of Vermont
 Yankee Nuclear Power Station, including storage of spent-nuclear fuel, after Mark 1, 2012

Dear John Goodell:

I have reviewed the Department's database for documented occurrences of rare, threatened and endangered species and significant natural communities in the vicinity of the project area. I have attached the following:

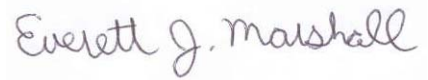
- 1) a list of occurrences of rare species and significant natural communities organized by survey site;
- 2) a explanation of ranking and status of species and natural communities;
- 3) two maps indicating locations of species and significant natural communities organized by survey site:
 - a) for the area above and in the vicinity of Vernon Dam; and
 - b) for the area below and in the vicinity of Vernon Dam;
- 4) a summary of the occurrence data for each record of rare species and significant natural community.

The occurrences of rare species and significant natural communities represented by circles are buffered points and the size of the circle takes into account spatial uncertainty. That is, the larger the circle size the greater the uncertainty as to the precise location.

I understand that there will not be any new construction at the site as part of this petition. The main concerns I have with the petition in regards to significant natural communities and rare species are with the potential for major accident at the nuclear plant or a catastrophic failure of the long-term storage of spent nuclear fuel after March 1, 2012. While I understand that the risks are small, they are real.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Everett J. Marshall". The signature is written in a dark ink and is positioned below the word "Sincerely,".

Everett Marshall
Biologist/Information Manager

LEGEND FOR VERMONT
SPECIES AND NATURAL COMMUNITY RANKING AND STATUS
Nongame and Natural Heritage Program
Vermont Fish and Wildlife Department
January 2005

GRANK = Global Rank, see explanation of ranks attached

SRANK = State Rank, see explanation of ranks attached

SPROT = State Protection Status

As per the Vermont Endangered Species Law (10 V.S.A. Chap. 123)

E: Endangered: in immediate danger of becoming extirpated in the state

T: Threatened: with high possibility of becoming endangered in the near future

ANR_STATUS

Information categories only; not established by this law

SC: Special Concern: rare; status should be watched

PE: Proposed for endangered

PT: Proposed for threatened

PD: Proposed for delisting

FPROT = Federal Protection Status

LE: Listed Endangered

LT: Listed Threatened

PDL: Proposed for delisting

EO TRACK? Indicates whether Element Occurrence (EOs) of the Element are tracked by the agency.

Y - Track all extant and selected historical EOs

P - Track selected extant EOs (i.e., partial tracking)

W - Track on a watch list only

N - Do not track; includes mostly common species

(null) - Not assessed or unknown

EXPLANATION OF STATE AND GLOBAL RANKS

State (S) Rank - Value that best characterizes the relative rarity (abundance) or endangerment of a native taxon within Vermont's geographic boundary.

Global (G) Rank - Value that best characterizes the relative rarity (abundance) or endangerment of a native taxon throughout its range.

1 - Critically imperiled (very rare): At very high risk of extinction or extirpation due to extreme rarity (often 5 or fewer populations or occurrences), very steep declines, or other factors

2 - Imperiled (rare): At high risk of extinction or extirpation due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors

3 - Vulnerable (uncommon to rare): At moderate risk of extinction or extirpation due to restricted range, relatively few populations or occurrences (often 80 or fewer), recent and widespread declines, or other factors

4 - Apparently secure (common to uncommon): locally common or widely scattered to uncommon, but not rare; some cause for long-term concern due to declines or other factors; or stable over many decades and not threatened but of restricted distribution or other factors

5 - Secure (common): widespread and abundant

H - Possibly extinct/extirpated: Missing; known from only historical occurrences but still some hope of rediscovery

X - Presumed extinct/extirpated: Not located despite intensive searches and virtually no likelihood of rediscovery

U = unrankable: Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

NR = not ranked: Not yet assessed.

NA = not applicable (Element is not a suitable target for conservation for one of the following reasons:

Hybrid: Element represents an interspecific hybrid without conservation value.

Exotic Origin: Element is not native to the State.

Accidental/Nonregular: Element is not regularly found in the State, in other words, infrequent and outside usual range.

Not Confidently Present: Element's presence in the State has been reported, but the report is unconfirmed or doubtful; Element has been falsely reported, and may or may not potentially occur; Element may potentially occur (e.g., habitat is suitable); Element was never present in the State despite presence in surrounding areas.

No Definable Occurrences: Element is native and appears regularly but lacks practical conservation concern in the State because it is transient or occurs in a dispersed, unpredictable manner.

Synonym: Element reported as occurring in the State, but the Vermont Nongame and Natural Heritage Program does not recognize the taxon; therefore the Element is not assigned a State rank.

An indicator of uncertainty about the rank, either in the form of a range rank or a ? qualifier, may follow a numeric basic rank.

For national and state ranks, a suffix that describes the population of a migratory species may follow:

B = breeding population

N = nonbreeding population

M = transient/migratory population

Rare and Uncommon Species & Significant Natural Communities
Above and in the vicinity of Vernon Dam
Survey Sites
February 2008

Data from VCGI and VFWD

500 0 500 Feet



NORTH VERNON FLOODPLAIN

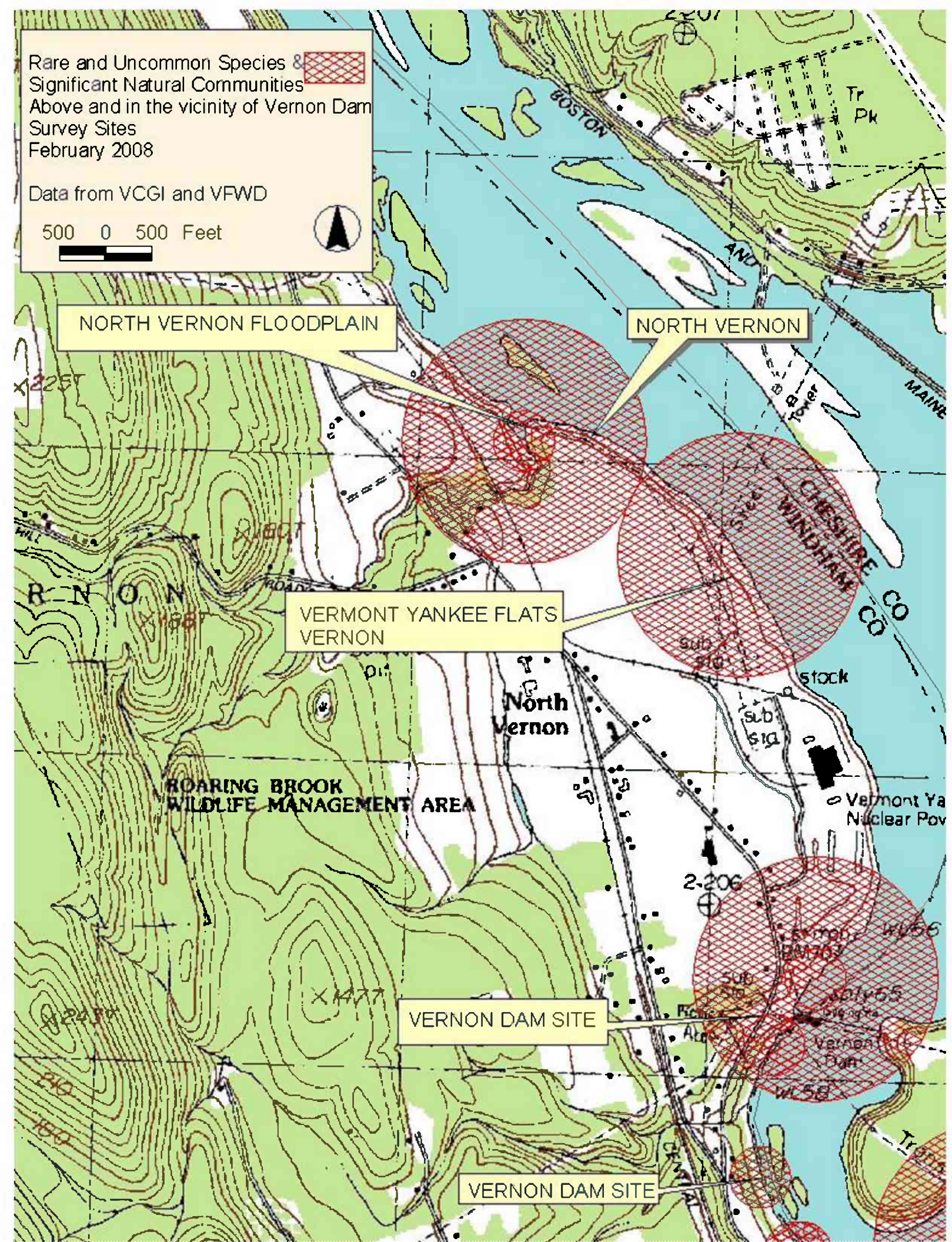
NORTH VERNON

VERMONT YANKEE FLATS
VERNON

ROARING BROOK
WILDLIFE MANAGEMENT AREA

VERNON DAM SITE

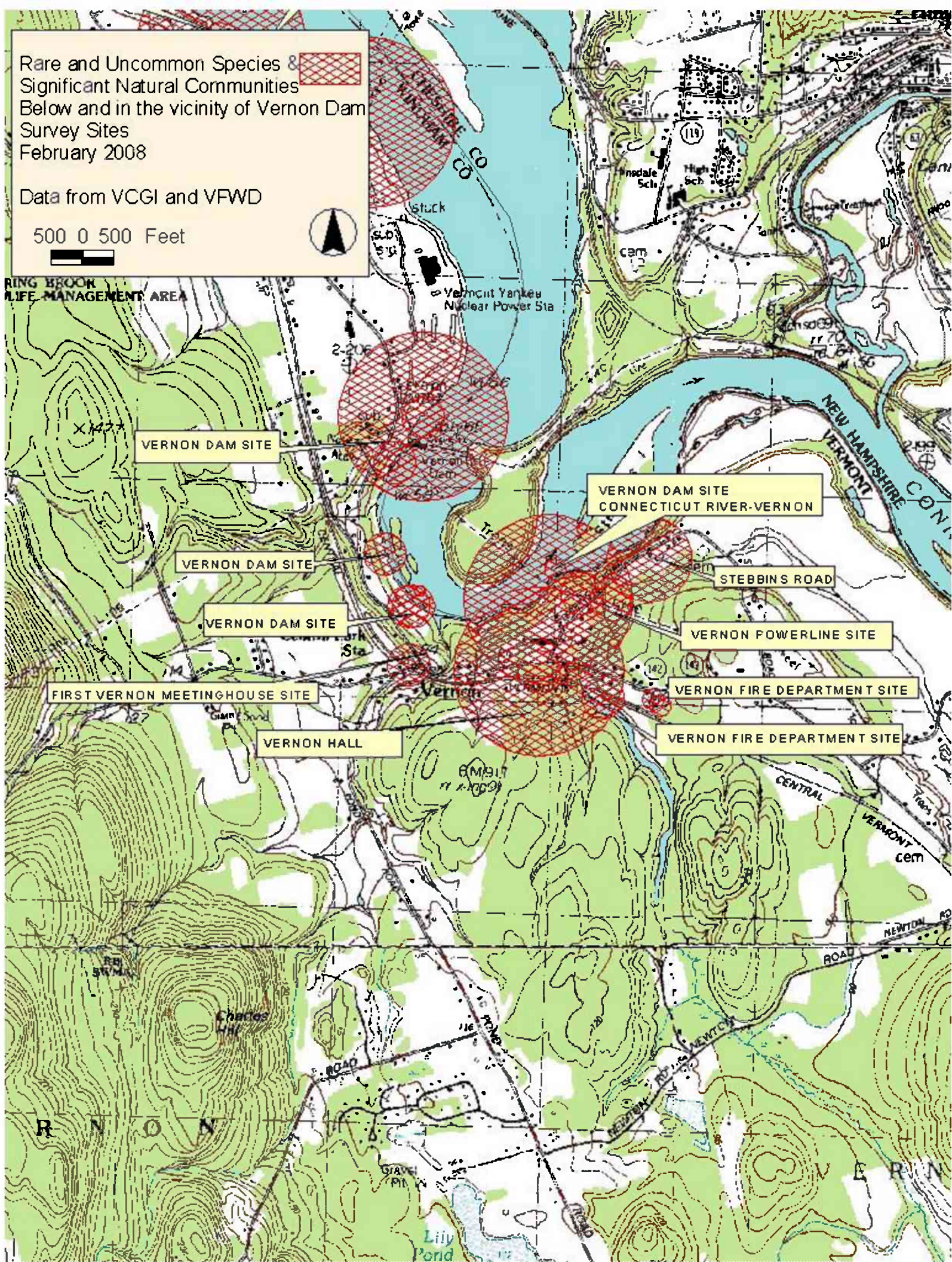
VERNON DAM SITE



Rare and Uncommon Species &
Significant Natural Communities
Below and in the vicinity of Vernon Dam
Survey Sites
February 2008

Data from VCGI and VFWD

500 0 500 Feet



Vermont Nongame and Natural Heritage Program
Department of Fish and Wildlife
Biotics Database

Haliaeetus leucocephalus

Bald Eagle

Global Rank: G5

State Rank: S1B,S2N

EO # 2

Federal Status:

State Status: E

CONNECTICUT RIVER-HINSDALE/VERNON

County

Directions 2004: First Island South of Vernon Dam: Off Governor Hunt Road approximately 0.4 miles north of intersection with Route 142. From boat ramp below Vernon Dam walk along rivershore south approximately 2000 feet. Nest is located on the south end, west side of large island in the river.

May also be visible from Route 142 or Post Office to south. May require permission to access from private landowners. Stebbins Island: Approximately 1 mile downstream of dam, around big bend. Nest located near the upstream end of the island, where the little peninsula connects to the main island.

Survey Date 2004-06

Last Observation Date 2004-06

First Observation Date 1999

EO Data

2004: New nest on first island downstream of dam. Fledged 1 chick. 2003: Nesting attempt on Stebbins Island not successful. 2002: Nesting attempt on Stebbins Island not successful. 2001: Fledged 2 chicks from Stebbins Island. 2000: Nesting attempt on Stebbins Island not successful. 1999: First nest-building on Stebbins Island; nesting not successful.

Reference Code

Citation

U04NWF01VTUS

National Wildlife Federation. 2004. Bald eagle sighting database. Northeast Natural Resource Center, Montpelier, Vermont.

PNDMAR04VTUS

Martin, Chris. Senior Biologist. Audubon Society of NH, 3 Silk Farm Road, Concord, NH 03301. 603/224-9909, x317. cmartin@nhaudubon.org

PNDSHI01VTUS

Shippee, J. Assistant Information Manager. Vermont Nongame and Natural Heritage Program.

Vermont Nongame and Natural Heritage Program
Department of Fish and Wildlife
Biotics Database

Hybognathus regius

Eastern Silvery Minnow

Global Rank: G5

State Rank: S3S4

EO # 5

Federal Status:

State Status:

CONNECTICUT RIVER-VERNON

County

Town

Windham

Vernon

Directions In Connecticut River near Stebbins Island.

Survey Date 1987

Last Observation Date 1987

First Observation Date 1987

EO Data

1987: Collected by Aquatech.

Reference Code

Citation

UNDVER01VTUS

Vermont Department of Environmental Conservation. Fish distribution database. Biomonitoring and Aquatic Studies Section, Water Quality Division, Waterbury, Vermont.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Helianthus strumosus

Harsh Sunflower

Global Rank: G5

State Rank: S2S3

EO # 1

Federal Status:

State Status: T

FIRST VERNON MEETINGHOUSE SITE

County

Town

Windham

Vernon

Directions JUNCTION OF VT. RTE. 142 AND THE N. END OF POND ROAD.

General Description

DRY, SANDY BANK, ERODING DUE TO USE AS ACCESS ROAD TO CORN FIELD. SLOPE BELOW "WOODS" CUT AND BRUSHY, WITH SCATTERED SUNFLOWERS.

Survey Date 1985-08-07

Last Observation Date 1985-08-07

First Observation Date 1985

EO Data

10-20 GENETS WITH 30-40 SHOOTS. IN LEAF, BUD, AND FLOWER. 90% OF PLANTS MATURE. PREFERS SLOPING, DRY, SUNNY HABITAT.

Reference Code

Citation

F85ZIK54VTUS

ZIKA, P.F. AND THOMPSON. 1985. FIELD SURVEY TO FIRST VERNON MEETINGHOUSE OF AUGUST 7.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Equisetum pratense

Meadow Horsetail

Global Rank: G5

State Rank: S3

EO # 6

Federal Status:

State Status:

NORTH VERNON

County

Town

Windham

Vernon

Directions ALLUVIAL WOODS ALONG CONNECTICUT RIVER.

Survey Date

Last Observation Date

1981-06-02

First Observation Date

1981

EO Data

SPECIMEN AT UVM (PFZ #3373)

Reference Code

Citation

S81ZIKVTVTUS

ZIKA, P.F. (3505). SPECIMEN VT.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Stellaria alsine

Trailing Stitchwort

Global Rank: G5

State Rank: S1

EO # 3

Federal Status:

State Status:

NORTH VERNON FLOODPLAIN

County

Town

Windham

Vernon

Directions Between Route 142 and Connecticut River just north of Tyler Hill Road. East of cemetery. Plants along stream near river.

General Description

Springy streambank forest.

Survey Date 1984-09-21

Last Observation Date 1984-09-21

First Observation Date 1984-09-21

EO Data

1984: A big (100 individuals?) healthy patch covering about 2 square yards. A monoculture of the species.

Reference Code

Citation

U84THO04VTUS

Thompson, E. and P. Zika. 1984. Special plant survey form for *Stellaria alsine* at North Vernon Floodplain, Vernon, Vermont on 21 September 1984. Vermont Nongame and Natural Heritage Program.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Bufo fowleri

Fowler's Toad

Global Rank: G5

State Rank: S1

EO # 3

Federal Status:

State Status: SC

STEBBINS ROAD

County

Town

Windham

Vernon

Directions From Route 142, at nursing home take Stebbins Road to Smead Lumber Co. (Stebbins Road continues back to Route 142 at Schoolhouse Grocery.)

General Description

Near or in (?) floodplain of Connecticut River.

Survey Date 2003

Last Observation Date 2003

First Observation Date 1994-07-07

EO Data

2003: Observed by Jim Andrews? Need more info. 2001: Not observed in search on 27 June. 1996: None observed on 08 September?
1994: Three captured (2 of them photographed) and released. Another heard in agricultural fields surrounding Smead Lumber Co.

Reference Code

Citation

U03AND02VTUS

Andrews, J. 2003. A reptile and amphibian survey of the Roaring Brook Wildlife Management Area in Vernon and Guilford, Vermont. Funded by the Vermont Fish and Wildlife Department.

UNDAND01VTUS

Andrews, J. No date. Vermont Reptile and Amphibian Atlas. Biology Department, Middlebury College, Middlebury, VT.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Juncus acuminatus

Tapering Rush

Global Rank: G5

State Rank: S1

EO # 1

Federal Status:

State Status:

VERMONT YANKEE FLATS

County

Town

Windham

Vernon

Directions Vernon, frequent in marsh adjacent to the west shore of the Connecticut River approx. 1 mile north of Vernon Dam.

Survey Date

Last Observation Date

1968-08-30

First Observation Date

1968

EO Data

A single collection.

Panicum virgatum

EO # 3

VERNON

Switch Grass

Global Rank: G5

Federal Status:

State Rank: S3

State Status:

County

Windham

Town

Vernon

Directions

Vernon. Countryman's 1969 coll.: occasional at the edge of a marsh adjacent to the west shore of the Connecticut River approx. 1.0 mi. north of Vernon Dam. 1898 coll. open ground.

Survey Date

1982-07-27

Last Observation Date

1982-07-27

First Observation Date

1898

EO Data

Several collections - Zika's 1982 coll at VT, Robinson's 1898 coll at NEBC, 1969 coll !

VERNON DAM SITE

County	Town
Windham	Vernon

Directions South of Vernon Dam; immediately downstream of the NEPCO recreation parking lot.

General Description

This narrow strip of floodplain forest occupies the outer side of the very sharp bend of the Connecticut River immediately below Vernon Dam.

Survey Date	1997-09-06	Last Observation Date	1997-09-06	First Observation Date	1990
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EO Data

1997: The forest on the mainland contains some very large cottonwood (*Populus deltoides*) mixed with smaller silver maple (*Acer saccharinum*), both ranging in age from 60-75 years. While shrubs and saplings are sparse, the groundcover vegetation is quite lush with a great deal of variation in species composition and distribution. While the areas most distant from the river are dominated by ostrich fern (*Matteuccia struthiopteris*), areas close to the river have white snakeroot (*Eupatorium rugosum*), poison ivy (*Toxicodendron radicans*), and white-grass (*Leersia virginica*) as important species. Although having significant accumulations of fresh sand and litter alluvium, this zone nearest to the river is not built up as a levee, which normally would be found in this position relative to the river. A couple stems of giant Solomon's seal were observed in this floodplain forest. Though this variety of Solomon's seal is currently in question, it is nonetheless extremely rare in Vermont.

Reference Code	Citation
N97ENG02VTUS	Engstrom, Brett. 1997. Field Inventory of Vernon Dam Site on 6 September 1997.
U98SOR03VTUS	Sorenson, E. et al. 1998. Floodplain Forests of Vermont, Some Sites of Ecological Significance. Prepared for the Vermont Nongame and Natural Heritage Program.
F90THOW7VTUS	Thompson, Elizabeth. 1990. Memorandum to the Nongame and Natural Heritage Program dated 9 July 1990.
F84THOW2VTUS	Field Survey (temporary placeholder citation)
PNDRAW01VTUS	RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496
PNDTHO01VTUS	Thompson, Elizabeth H.
S68COUNHVTUS	Specimen (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Elatine minima

Small Water-wort

Global Rank: G5

State Rank: S1

EO # 1

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions VERNON DAM PORTAGE. NORTH OF PORTAGE.

General Description

Mudflats of a major river.

Survey Date 1982

Last Observation Date 1982

First Observation Date 1982

EO Data

1982: ABOUT 500 FRAGMENTS OR PLANTS ALONG THE MUDFLATS. SPECIMEN (ZIKA #6497) AT VT.

Reference Code

Citation

S82ZIKVTVTUS

Specimen (temporary placeholder citation)

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Eleocharis intermedia

Matted Spikerush

Global Rank: G5

State Rank: S3

EO # 5

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions SOUTH OF VERNON DAM. MUD FLATS 0.3 MILES SOUTH OF DAM, WEST OF SMALL ISLAND.

General Description

LOW ENERGY RIVERBANK COMMUNITY MUDFLATS IN "SEASONAL" CHANNEL.

Survey Date 1984-08-30

Last Observation Date 1984-08-30

First Observation Date 1984

EO Data

1984: ABOUT 20 PLANTS SCATTERED IN A SMALL AREA OF MUD.

Reference Code

Citation

F84THOX0VTUS

Field Survey (temporary placeholder citation)

PNDTHO01VTUS

Thompson, Elizabeth H.

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294
WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

F84THOW2VTUS

Field Survey (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Equisetum pratense

Meadow Horsetail

Global Rank: G5

State Rank: S3

EO # 29

Federal Status:

State Status:

VERNON DAM SITE

County

Windham

Town

Vernon

Directions South of Vernon Dam.

General Description

Fairly extensive floodplain forest below the dam. Dominated by silver maple and cottonwood, and the herb layer is dominated by ostrich fern, with nettles and others.

Survey Date 1990-06-15

Last Observation Date 1990-06-15

First Observation Date 1990-06-15

EO Data

1990: over 100 plants.

Reference Code

F84THOW7VTUS

PNDRAW01VTUS

PNDTHO01VTUS

F84THOW2VTUS

S68COUNHVTUS

Citation

Field Survey (temporary placeholder citation)

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294

WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

Thompson, Elizabeth H.

Field Survey (temporary placeholder citation)

Specimen (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program
Department of Fish and Wildlife
Biotics Database

Eragrostis frankii

Frank's Love-grass

Global Rank: G5

State Rank: S3

EO # 1

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions AT VERNON TAKE GOVERNOR HUNT RD. TO PICNIC AREA ACROSS FROM DAM; FROM CANOE PORTAGE SILTY FLATS EXTEND TO THE N.

General Description

A MUD FLAT OF A MAJOR RIVER.

Survey Date 1982-08-22

Last Observation Date 1982

First Observation Date 1982-08-22

EO Data

1982: 10 PLANTS OBSERVED. ASSOCIATED WITH CYPERUS SP., RORIPPA PALUSTRIS, PANICUM DICHOTOMIFLORUM,ELEOCHARIS OBTUSA.

Reference Code

Citation

F82ZIK34VTUS

Field Survey (temporary placeholder citation)

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

Vermont Nongame and Natural Heritage Program
Department of Fish and Wildlife
Biotics Database

Hypericum ascyron

Great St. John's-wort

Global Rank: G4

State Rank: S2S3

EO # 24

Federal Status:

State Status: T

VERNON DAM SITE

County

Town

Windham

Vernon

Directions JUST NORTH OF DAM.

General Description

WETLAND BACK OF SANDY SHORE, JUST NORTH OF VERNON DAM. WETLAND IS RICH WITH ROBUST VEGETATION.

Survey Date 1987-06-29

Last Observation Date 1987-06-29

First Observation Date 1987

EO Data

1987: A LARGE, ROBUST POPULATION- CA. 100-500 PLANTS IN FLOWER AND FRUIT, 4-5' TALL GROWING 20' BACK FROM SHORE, FULL SUN, SOMETIMES INUNDATED.

Reference Code

Citation

F87TH007VTUS

THOMPSON, E. H. 1987. FIELD SURVEY TO VERNON DAM, JUNE 29.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Mimulus moschatus

Musk Flower

Global Rank: G5

State Rank: S2S3

EO # 3

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions 1987: SEEPAGE AREA JUST BELOW THE DAM

General Description

SEEPAGE AREA, CONTINUALLY MOIST. FULL SUN.

Survey Date 2001-08-14

Last Observation Date 1987-09-04

First Observation Date 1987

EO Data

2006: No traces of plant found on 5 July. 2001: No plants observed by Plant Conservation Volunteer on 14 August. 1991: no plants observed after thorough search. 1990: NO PLANTS OBSERVED. 1987: ONE CLUMP WITH 5 STEMS.

Reference Code

Citation

U06CHA01VTUS

Charkes, A., C. Wilfong, and R. Rembisz. 2006. PCV rare plant form for *Mimulus moschatus* at Vernon Dam in Vernon Vermont, on 5 July 2006. Vermont Nongame and Natural Heritage Program.

F01CLA02VTUS

Clarkes, A. 2001. Field visit to Vernon Dam of 14 August 2001. NEPCoP field form.

PNDPOP01HQUS

Popp, Robert. Heritage Coordinator/Botanist, Vermont Nongame and Natural Heritage. Personal communication.

F87THO21VTUS

THOMPSON, E.H. 1987. FIELD SURVEY TO VERNON DAM OF SEPT. 4

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Polygonatum biflorum var.
commutatum
EO # 1

Giant Solomon's Seal

Global Rank: G5T5

State Rank: S1

Federal Status:

State Status:

VERNON DAM SITE

County	Town
Windham	Vernon

Directions ALONG PATH IN WOODS ABOUT 0.5 MILES SOUTH OF VERNON DAM

General Description

Fairly extensive floodplain forest below the dam. Dominated by silver maple and cottonwood, and the herb layer is dominated by ostrich fern, with nettles and others.

Survey Date	2001-06-12	Last Observation Date	2001-06-12	First Observation Date	1895
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EO Data

2001: Vermont Yankee subpopulations (7 sub- sites). Plants occur at 7 sub- sites totaling about 157 plants although many of these are likely ramets. Site 1: By fence corner within 5 feet of mowed edge- 16 vegetative plants (one mature plant, others all small). Site 2: Begins 50 feet beyond fence corner, extends 20 feet down the slope toward the path (60 plants). Site 3: About 150 feet beyond the fence corner about 20 feet before the beginning of the tower (15 plants, 12 large plants in flower, the other 3 small and vegetative). Site 4: Midway between the jogs in the fenceline (2 plants both in flower). Site 5: 70 to 100 feet beyond the previous population (about 30 small, vegetative plants). Site 6: 50 feet beyond the 2nd jog in the fence line (4 plants, 1 in flower, the others vegetative). Site 7: About 50 feet before the 3rd jog in the fence line- 30 small vegetative plants. Vernon Dam sub- sites (5 sub-sites). Site 1: Along edge of field by red blazed (barely visible blazing) 49 cm dbh elm with Parthenocissus on the trunk (16 plants- 10 in flower, 6 vegetative). Site 2: Approximately 75 feet north by dead elm covered with Vitis (7 plants- 3 in flower and 4 vegetative). Site 3: Another 75 feet north, approximately 30 feet south of huge cotton wood (4 vegetative plants). Site 4: About 90 feet north of huge cottonwood beneath sumac (11 plants- 3 in flower and 8 vegetative). Site 5: In woods behind the hedgerow on the side of the trail closest to the river (5 vegetative plants) 1999: Plant not found. Searched along the path , 10' on either side, for at least 1 mile south of the dam. 1997: 3 individuals observed in the large cottonwood portion of the floodplain forest. 1994: 8 plants observed at North subpopulation and 7 plants at south subpopulation; total of 9 plants in fruit. 1993: one plant observed, no fruit or flower evident. 1990: 8 plants, in bud and in flower. 1984: One plant seen in shady woods. Thorough survey not done.

Reference Code	Citation
U99CHA02VTUS	Charkes, A. 1999. Rare plant occurrence reporting form for Polygonatum biflorum var. commutatum. Vermont Nongame and Natural Heritage Program.
U94BRU01VTUS	Brumback, B. 1994. Field Survey to Vernon Dam of 13 September 1994.
PNDBRU01VTUS	Brumback, William E. Conservation Director New England Wildflower Society. Framingham, MA.
PNDTHO01VTUS	Thompson, Elizabeth H.
F01POP04VTUS	Popp, R. and D. Allard. 2002. Field visit to Vernon Dam and Vermont Yankee of 12 June 2001.
N97ENG02VTUS	Engstrom, Brett. 1997. Field Inventory of Vernon Dam Site on 6 September 1997.
U94POP02VTUS	Popp, Robert. 1994. Field Survey to Vernon Dam of 29 September 1994.
U98SOR03VTUS	Sorenson, E. et al. 1998. Floodplain Forests of Vermont, Some Sites of Ecological Significance. Prepared for the Vermont Nongame and Natural Heritage Program.
PNDPOP01VTUS	Popp, Robert G. Botanist. Vermont Nongame and Natural Heritage Program.
F84THOW7VTUS	Field Survey (temporary placeholder citation)
F84THOW2VTUS	Field Survey (temporary placeholder citation)
PNDRAW01VTUS	RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496
S68COUNHVTUS	Specimen (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Rhododendron nudiflorum

Pinxter-flower

Global Rank: G5

State Rank: S1

EO # 1

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions Along the shore of the Connecticut River circa 3/4 mile south of Vernon Dam, just above Stebbin Island.

General Description

Along shore of river.

Survey Date 1965-08-03

Last Observation Date 1965-08-03

First Observation Date 1965-08-03

EO Data

1965: One collection from this site.

Reference Code

Citation

S65COUNHVTUS

Countyman, W. 1965. Specimen # 18317 at NHA.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Scirpus purshianus

Pursh's Bulrush

Global Rank: G4G5

State Rank: S2S3

EO # 2

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions South of Vernon Dam. Sand flat about 0.1 miles below dam.

General Description

A seepage community provided by a small stream which comes down just below the dam.

Survey Date 1991-08-12

Last Observation Date 1991-08-12

First Observation Date 1984

EO Data

1991: one clump with 14 culms observed, most with 1 to 4 spikelets. 1990: no plants observed although 3 sterile unidentifiable *Scirpus* were observed. 1987: 1 clump of 20 stems, recumbent. 1984: about 5 plants seen, in open cobbly area, somewhat damp. Assoc: *Cyperus esculentus*, *Lythrum salicaria*, *Lindernia dubiaspecimen* (Thompson #753) at VT.

Reference Code

Citation

PNDPOP01VTUS

Popp, Robert G. Botanist. Vermont Nongame and Natural Heritage Program.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Tillaea aquatica

Pygmyweed

Global Rank: G5

State Rank: S2

EO # 2

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions AT VERNON TAKE GOVERNOR HUNT RD. TO PICNIC AREA ACROSS FROM DAM; FROM CANOE PORTAGE SILTY FLATS EXTEND TO THE N.

General Description

A MUD FLAT OF A MAJOR RIVER.

Survey Date 1982-08-22

Last Observation Date 1982

First Observation Date 1982-08-22

EO Data

1982: 15 PLANTS SEEN GROWING WITH ELEOCHARIS ACICULARIS, ELATINE MINIMA, AND EXOTIC WEEDS.

Reference Code

Citation

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

F82ZIK33VTUS

Field Survey (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Zannichellia palustris

Horned Pondweed

Global Rank: G5

State Rank: S2

EO # 1

Federal Status:

State Status:

VERNON DAM SITE

County

Town

Windham

Vernon

Directions VERNON DAM PORTAGE. MUDFLATS JUST ABOVE DAM

General Description

MAJOR RIVER. PLANTS FOUND ON MUDFLATS.

Survey Date 1982-08-22

Last Observation Date 1982-08-22

First Observation Date 1982

EO Data

1982: 2 FERTILE PLANTS WASHED UP ON SHORE. ROOTED COLONY NOT SEEN.

Reference Code

Citation

F84ZIK36VTUS

ZIKA, P.F. 1982. FIELD SURVEY TO VERNON DAM PORTAGE OF AUGUST 22, 1984.

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Aureolaria pedicularia

Feverweed

Global Rank: G5

State Rank: S1

EO # 2

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions VERNON FIRE DEPARTMENT. SOUTHWEST OF FIRE DEPARTMENT IN SOUTH VERNON, ALONG
RAILROAD TRACKS (DUE SOUTH OF STEBBINS ISLAND).

Survey Date 1982

Last Observation Date 1982

First Observation Date 1982

EO Data

NO DATA. SEEN BY P.F. ZIKA, 1982. A FEW HISTORICAL COLLECTIONS FROM VERNON.

Reference Code

Citation

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Bartonia virginica

Yellow Bartonia

Global Rank: G5

State Rank: S2

EO # 1

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions VERNON FIRE DEPARTMENT. OPPOSITE STEBBINS ROAD LOOP.

General Description

DRY OPEN AREA ALONG RAILROAD TRACKS.

Survey Date 1984

Last Observation Date 1984

First Observation Date 1982

EO Data

NO DATA. SEEN 1984.

Reference Code

Citation

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

Vermont Nongame and Natural Heritage Program
Department of Fish and Wildlife
Biotics Database

Carex brevior

Sedge

Global Rank: G5?

State Rank: S2

EO # 6

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions GO TO VERNON. FIRE DEPT ON RTE 142, 0.25 MI SOUTHEAST OF WEST END OF STEBBINS RD
INTERSECTION. PLANTS SW OF FIRE STATION, ACROSS RR TRACKS.

General Description

OLD FIELD. SNE NUTRIENT-RICH STREAMSIDE/LAKESIDE MARSH. DRY OPEN AREA ADJACENT TO RAILROAD
TRACKS AND SMALL MARSH WITH STREAM FLOWING THROUGH.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1996

EO Data

1996: uncommon in field south of the firehouse.

Reference Code

Citation

F96THO01VTUS

Thompson, E.H. et al. 1996. Field survey to Vernon Fire Station on 24 August 1996.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Cassia nictitans

Wild Sensitive Plant

Global Rank: G5

State Rank: S2

EO # 8

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Windham

Town

Vernon

Directions IN VERNON, TAKE RTE 142 SOUTH. FIRE DEPT ON RTE 142 0.25 MI SOUTHEAST OF WEST END OF STEBBINS RD INTERSECTION. PLANTS IN FIELD SOUTH OF FIRE STATION. 2006: On the north side of the railroad tracks behind an old barn and cinder block building.

General Description

2006-08-31: Artificial habitat but kept open by railroad and property owner. 1984: MOWED FIELD DOMINATED BY PERENNIAL GRASSES. DRY SAND TO GRAVEL SOILS.

Survey Date 2006-08-31	Last Observation Date 2006-08-31	First Observation Date 1984
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EO Data

2006-08-31 Approx. 250+ plants in flower with immature fruit, in 4 populations: A: 50 plants behind stump dump and midway between driveway and tracks; B: 50+ plants between old barn and cinder block building; C: 100plants behind cinder block building; D: 50+ plants on west side of cinder block building. 1996-08-24: Couple hundred stems in flower and fruit, in 100 meter square area. 1994: observed scattered along road & parking area. 1984: CA 1000 SHOOTS IN LEAF AND FLOWER. 60% OF POP'N MATURE. SCATTERED ALONG ROAD IN DRY, OPEN FIELD.

Reference Code

Citation

F06POP40VTUS

Popp, R., 2006., Act 250 Review of Cassia nictitans and Lespedeza hirta at Vernon Fire Dept., Vernon, Vermont on 31 August 2006. Vermont Nongame and Natural Heritage Program.

F96THO01VTUS

Thompson, E.H. et al. 1996. Field survey to Vernon Fire Station on 24 August 1996.

F85THO78VTUS

Field Survey (temporary placeholder citation)

F85ZIK53VTUS

Field Survey (temporary placeholder citation)

PNDJEN01VTUS

Jenkins, Jerry C. White Creek, NY

PNDDES01VTUS

DesMeules, Marc. State Planning Office. State of Maine, Augusta, ME.

F94POP12VTUS

Popp, R. 1994. Field Survey to Vernon Fire Department of 29 September 1994.

PNDTHO01VTUS

Thompson, Elizabeth H.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Hypericum gentianoides

Orange-grass St. John's-wort

Global Rank: G5

State Rank: S2

EO # 9

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions GO TO VERNON. FIRE DEPT ON RTE 142, 0.25 MI SOUTHEAST OF WEST END OF STEBBINS RD
INTERSECTION. PLANTS SW OF FIRE STATION, ACROSS RR TRACKS.

General Description

OLD FIELD. SNE NUTRIENT-RICH STREAMSIDE/LAKESIDE MARSH. DRY OPEN AREA ADJACENT TO RAILROAD
TRACKS AND SMALL MARSH WITH STREAM FLOWING THROUGH.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1996

EO Data

1996: Edge of RR ballast; abundant; SW of firehouse; full sun; with goldenrods and Rubus.

Reference Code

Citation

F96THO01VTUS

Thompson, E.H. et al. 1996. Field survey to Vernon Fire Station on 24 August 1996.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Lespedeza hirta

Hairy Bush-clover

Global Rank: G5

State Rank: S1

EO # 1

Federal Status:

State Status: T

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions 1984: VERNON FIRE DEPARTMENT. SOUTHWEST OF FIRE DEPARTMENT IN SOUTH VERNON, ALONG RR (DUE SOUTH OF STEBBINS ISLAND). 2006-08-31: Plants along the west side of the cinder block building between the tracks and Rte 142, in an unmowed area adjacent to an industrial building and in a hedgerow going up a slope.

General Description

2006-08-31: Artificial habitat but kept open by railroad and property owner.

Survey Date 2006-08-31

Last Observation Date 2006-08-31

First Observation Date 1982

EO Data

2006-08-31: 4 multi-stem clumps along the west side of cinder block building and beyond (towards Rte 142). Plants in flower with immature fruit. 1982: NO DATA. SEEN BY P.F. ZIKA 1982. A FEW HISTORICAL COLLECTIONS FROM VERNON.

Reference Code

Citation

F06POP40VTUS

Popp, R., 2006., Act 250 Review of Cassia nictitans and Lespedeza hirta at Vernon Fire Dept., Vernon, Vermont on 31 August 2006. Vermont Nongame and Natural Heritage Program.

PNDZIK01VTUS

ZIKA, P.F. OREGON NATURAL HERITAGE PROGRAM.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Panicum oligosanthos

Few-flowered Panic-grass

Global Rank: G5

State Rank: S2

EO # 1

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Windham

Town

Vernon

Directions GO TO VERNON. FIRE DEPT ON RTE 142, 0.25 MI SOUTHEAST OF WEST END OF STEBBINS RD INTERSECTION. PLANTS SW OF FIRE STATION, ACROSS RR TRACKS.

General Description

OLD FIELD. SNE NUTRIENT-RICH STREAMSIDE/LAKESIDE MARSH. DRY OPEN AREA ADJACENT TO RAILROAD TRACKS AND SMALL MARSH WITH STREAM FLOWING THROUGH.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1984

EO Data

1996: Probably several hundred stems in 2-3 acre area. Patches of big and little Andropogons. UP TO 5000 PLANTS IN LEAF AND FRUIT; 80% MATURE. MIXED IN WITH OTHER GRASSES, LOW SHRUBS AND HERBS. EVIDENCE OF SEXUAL AND ASEXUAL REPRODUCTION. SPECIMEN (EHT#591) AT VT.

Reference Code

Citation

F85THO78VTUS

Field Survey (temporary placeholder citation)

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

S84THOVTVTUS

Specimen (temporary placeholder citation)

F96THO01VTUS

Thompson, E.H. et al. 1996. Field survey to Vernon Fire Station on 24 August 1996.

F85THO03VTUS

THOMPSON, E.H. AND P.F. ZIKA. 1985. FIELD SURVEY TO VERNON FIRE DEPARTMENT OF AUGUST 7.

F85ZIK53VTUS

Field Survey (temporary placeholder citation)

PNDTHO01VTUS

Thompson, Elizabeth H.

PNDDES01VTUS

DesMeules, Marc. State Planning Office. State of Maine, Augusta, ME.

F84THOH3VTUS

Field Survey (temporary placeholder citation)

F84THOH2VTUS

Field Survey (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Paspalum ciliatifolium

Slender Paspalum

Global Rank: G3G5

State Rank: S2

EO # 2

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions IN VERNON TAKE RTE 142 SOUTH. FIRE DEPT ON RTE 142, 0.25 MI SOUTHEAST OF WEST END OF STEBBINS RD INTERSECTION. PLANTS IN FIELD ADJACENT TO FIRE STATION (JUST SOUTH OF).

General Description

MOWED FIELD DOMINATED BY PERENNIAL GRASSES. DRY SAND TO GRAVEL SOILS.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1985

EO Data

1996: A dominant of mowed lawn around the firehouse. CA 200 SHOOTS. PLANTS 80% MATURE, WITH MATURE FRUIT. FOUND IN FLAT, DRY, OPEN HABITAT.

Reference Code

Citation

F85THO03VTUS

THOMPSON, E.H. AND P.F. ZIKA. 1985. FIELD SURVEY TO VERNON FIRE DEPARTMENT OF AUGUST 7.

PNDJEN01VTUS

Jenkins, Jerry C. White Creek, NY

F96THO01VTUS

Thompson, E.H. et al. 1996. Field survey to Vernon Fire Station on 24 August 1996.

F85THO78VTUS

Field Survey (temporary placeholder citation)

F85ZIK53VTUS

Field Survey (temporary placeholder citation)

PNDTHO01VTUS

Thompson, Elizabeth H.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Polygala polygama

Racemed Milkwort

Global Rank: G5

State Rank: S2

EO # 1

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions GO TO VERNON. FIRE DEPT ON RTE 142, 0.25 MI SOUTHEAST OF WEST END OF STEBBINS RD
INTERSECTION. PLANTS FOUND SOUTHWEST OF RR TRACKS.

General Description

OPEN FIELD ADJACENT TO RAILROAD TRACK. DRY, SANDY/GRAVELLY.

Survey Date 1985-08-07

Last Observation Date 1985-08-07

First Observation Date 1984

EO Data

LESS THAN 5 PLANTS; MATURE AND IN FLOWER. IN 1984, ONE PLANT SEEN.

Reference Code

Citation

F85THO78VTUS

Field Survey (temporary placeholder citation)

F85ZIK53VTUS

Field Survey (temporary placeholder citation)

F84THOH2VTUS

Field Survey (temporary placeholder citation)

PNDENG01VTUS

Engstrom, Brett. Botanist and Ecologist. Plainfield, VT.

PNDTHO01VTUS

Thompson, Elizabeth H.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Polygala verticillata

Whorled Milkwort

Global Rank: G5

State Rank: S2

EO # 2

Federal Status:

State Status:

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions GO TO VERNON. FIRE DEPT ON RTE 142, 0.25 MI SOUTHEAST OF WEST END OF STEBBINS RD
INTERSECTION. PLANTS SW OF FIRE STATION, ACROSS RR TRACKS.

General Description

OLD FIELD. SNE NUTRIENT-RICH STREAMSIDE/LAKESIDE MARSH. DRY OPEN AREA ADJACENT TO RAILROAD
TRACKS AND SMALL MARSH WITH STREAM FLOWING THROUGH.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1996

EO Data

1996: 20-40 plants in 25 meter squared area located ca. 25 meters northwest of vacant cinderblock building south of firehouse. Open,
gravelly, disturbed soil. In fruit?

Reference Code

Citation

F96THO01VTUS

Thompson, E.H. et al. 1996. Field survey to Vernon Fire Station on 24 August 1996.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Solidago odora

Sweet Goldenrod

Global Rank: G5

State Rank: S1

EO # 1

Federal Status:

State Status: T

VERNON FIRE DEPARTMENT SITE

County

Town

Windham

Vernon

Directions VERNON FIRE DEPARTMENT. SW OF FIRE DEPARTMENT IN SOUTH VERNON (ON ROUTE 142), ACROSS RAILROAD TRACKS . SE CORNER OF VERNON.

General Description

OLD FIELD. SNE NUTRIENT-RICH STREAMSIDE/LAKESIDE MARSH. DRY OPEN AREA ADJACENT TO RAILROAD TRACKS, & SMALL MARSH WITH STREAM FLOWING THROUGH.

Survey Date 1983-06-29

Last Observation Date 1983-06-29

First Observation Date 1983

EO Data

NO SPSF. GROWS ALONG RAILROAD EMBANKMENT.

Reference Code

Citation

F83DES18VTUS

DESMEULES, M.R. 1983. FIELD SURVEY TO VERNON FIRE DEPARTMENT OF JUNE 29, 1983.

PNDDES01VTUS

DesMeules, Marc. State Planning Office. State of Maine, Augusta, ME.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Lechea mucronata

Hairy Pinweed

Global Rank: G5

State Rank: S1

EO # 4

Federal Status:

State Status: E

VERNON HALL

County

Town

Windham

Vernon

Directions 0.5 mile S of Central Park Station, on Main road to S. Vernon

General Description

Dry open ground

Survey Date

Last Observation Date

1902-08-23

First Observation Date

1898

EO Data

Two collections: unclear whether they are from the same place, but there were known to be two stations for the plant in Vernon at this time, and the other is recorded as EO # 2

Reference Code

Citation

S02BLAVTVTUS

Blanchard, W.H. 1902. Specimen at VT

S98ROBGHVTUS

Specimen (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Panicum oligosanthos

Few-flowered Panic-grass

Global Rank: G5

State Rank: S2

EO # 2

Federal Status:

State Status:

VERNON HALL

County

Town

Windham

Vernon

Directions VERNON HALL. BETWEEN RTE 142 AND RR TRACKS, 0.4 MI. E. OF VERNON.

General Description

OPEN GRASSY FIELD

Survey Date 1984-08-30

Last Observation Date 1984-08-30

First Observation Date 1984

EO Data

ABOUT 20 PLANTS SEEN SCATTERED IN FIELD

Reference Code

Citation

F84THOX9VTUS

Field Survey (temporary placeholder citation)

F84THOY1VTUS

Field Survey (temporary placeholder citation)

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294
WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

PNDTHO01VTUS

Thompson, Elizabeth H.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Cassia nictitans

Wild Sensitive Plant

Global Rank: G5

State Rank: S2

EO # 6

Federal Status:

State Status:

VERNON POWERLINE SITE

County

Town

Windham

Vernon

Directions In a powerline right-of-way just to the west of Stebbins Road; appoximately 500 feet north of the westerly most intersection of Stebbins Road and Route 142.

General Description

AN ARTIFICIALLY OPEN GRASSLAND WITH SCATTERED TREES AND SHRUBS, THAT IS SOMEWHAT PRAIRIE-LIKE.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1984

EO Data

1996: At least a couple hundred stems scattered in one 5 square meter patch. Same area as *Crotalaria sagittalis*. 1986: OBSERVED, NO DATA. 1984: 100+ INDIVIDUALS IN BOTH FRUIT AND FLOWERS, IN A SMALL AREA (CA. 10 SQUARE YARDS) NEAR A JEEP ROAD.

Reference Code

Citation

F84THOX1VTUS

Field Survey (temporary placeholder citation)

F96ENG12VTUS

Engstrom, B.E. 1996. Field Survey of Vernon Powerline on 24 August 1996.

F84THOX4VTUS

Field Survey (temporary placeholder citation)

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

PNDZIK01VTUS

ZIKA, P.F. OREGON NATURAL HERITAGE PROGRAM.

PNDTHO01VTUS

Thompson, Elizabeth H.

F85THO90VTUS

Field Survey (temporary placeholder citation)

F86THO73VTUS

Field Survey (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Crotalaria sagittalis

Rattlebox

Global Rank: G5

State Rank: S1

EO # 1

Federal Status:

State Status: T

VERNON POWERLINE SITE

County

Town

Windham

Vernon

Directions In a powerline right-of-way just to the west of Stebbins Road; appoximately 500 feet north of the westerly most intersection of Stebbins Road and Route 142.

General Description

AN ARTIFICIALLY OPEN GRASSLAND WITH SCATTERED TREES AND SHRUBS, THAT IS SOMEWHAT PRAIRIE-LIKE.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1984

EO Data

1996: Few plants (less than 20?) scattered in ROW ca. 20m West of road. Some of fruit mature (rattled). 1986: OBSERVED, NO DATA. 1984: ABOUT 50 PLANTS IN A LOCALIZED AREA (5 SQUARE YARDS). IN FLOWER AND FRUIT.

Reference Code

Citation

F85THO90VTUS

Field Survey (temporary placeholder citation)

F86THO73VTUS

Field Survey (temporary placeholder citation)

F96ENG12VTUS

Engstrom, B.E. 1996. Field Survey of Vernon Powerline on 24 August 1996.

F84THOX3VTUS

Field Survey (temporary placeholder citation)

F84THOX1VTUS

Field Survey (temporary placeholder citation)

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

PNDZIK01VTUS

ZIKA, P.F. OREGON NATURAL HERITAGE PROGRAM.

PNDTHO01VTUS

Thompson, Elizabeth H.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Helianthemum bicknellii

Plains Frostweed

Global Rank: G5

State Rank: S2S3

EO # 26

Federal Status:

State Status: T

VERNON POWERLINE SITE

County

Town

Windham

Vernon

Directions In a powerline right-of-way just to the west of Stebbins Road; approximately 500 feet north of the westerly most intersection of Stebbins Road and Route 142.

General Description

AN ARTIFICIALLY OPEN GRASSLAND WITH SCATTERED TREES AND SHRUBS, THAT IS SOMEWHAT PRAIRIE-LIKE.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1996

EO Data

1996: At least 5 vigorous stems.

Reference Code

Citation

F96ENG12VTUS

Engstrom, B.E. 1996. Field Survey of Vernon Powerline on 24 August 1996.

Vermont Nongame and Natural Heritage Program
Department of Fish and Wildlife
Biotics Database

Helianthemum canadense

Canada Frostweed

Global Rank: G5

State Rank: S2S3

EO # 29

Federal Status:

State Status:

VERNON POWERLINE SITE

County

Town

Windham

Vernon

Directions In a powerline right-of-way just to the west of Stebbins Road; approximately 500 feet north of the westerly most intersection of Stebbins Road and Route 142.

General Description

AN ARTIFICIALLY OPEN GRASSLAND WITH SCATTERED TREES AND SHRUBS, THAT IS SOMEWHAT PRAIRIE-LIKE.

Survey Date 1984-08-30

Last Observation Date 1984-08-30

First Observation Date 1984

EO Data

1984: OBSERVED, NO DATA.

Reference Code

Citation

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294
WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

F85THO90VTUS

Field Survey (temporary placeholder citation)

F84THOX4VTUS

Field Survey (temporary placeholder citation)

F84THOX1VTUS

Field Survey (temporary placeholder citation)

PNDZIK01VTUS

ZIKA, P.F. OREGON NATURAL HERITAGE PROGRAM.

PNDTHO01VTUS

Thompson, Elizabeth H.

F86THO73VTUS

Field Survey (temporary placeholder citation)

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Nyssa sylvatica

Black Gum or Tupelo

Global Rank: G5

State Rank: S3

EO # 2

Federal Status:

State Status:

VERNON POWERLINE SITE

County

Town

Windham

Vernon

Directions In a powerline right-of-way just to the east of Stebbins Road; approximately 500 feet north of the westerly most intersection of Stebbins Road and Route 142.

General Description

AN ARTIFICIALLY OPEN GRASSLAND WITH SCATTERED TREES AND SHRUBS, THAT IS SOMEWHAT PRAIRIE-LIKE.

Survey Date 1984-08-30 **Last Observation Date** 1984-08-30 **First Observation Date** 1984

EO Data

1984: THREE INDIVIDUALS ON THE EDGE OF THE PROW.

Reference Code

Citation

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294
WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

F84THOX8VTUS

Field Survey (temporary placeholder citation)

F84THOX1VTUS

Field Survey (temporary placeholder citation)

PNDZIK01VTUS

ZIKA, P.F. OREGON NATURAL HERITAGE PROGRAM.

PNDTHO01VTUS

Thompson, Elizabeth H.

Vermont Nongame and Natural Heritage Program

Department of Fish and Wildlife

Biotics Database

Panicum oligosanthos

Few-flowered Panic-grass

Global Rank: G5

State Rank: S2

EO # 3

Federal Status:

State Status:

VERNON POWERLINE SITE

County

Windham

Town

Vernon

Directions In a powerline right-of-way immediately west of Stebbins Road; appoximately 500 feet north of the westerly most intersection of Stebbins Road and Route 142.

General Description

AN ARTIFICIALLY OPEN GRASSLAND WITH SCATTERED TREES AND SHRUBS, THAT IS SOMEWHAT PRAIRIE-LIKE.

Survey Date 1996-08-24

Last Observation Date 1996-08-24

First Observation Date 1984

EO Data

1996: Scattered in the same area as *Cassia nictitans*. 1986: OBSERVED, BUT NO DATA. 1984: ABOUT 10 PLANTS SEEN (IN FRUIT), SMALL AREA NEAR PAVED ROAD.

Reference Code

Citation

F84THOX5VTUS

Field Survey (temporary placeholder citation)

PNDTHO01VTUS

Thompson, Elizabeth H.

F96ENG12VTUS

Engstrom, B.E. 1996. Field Survey of Vernon Powerline on 24 August 1996.

F86THO04VTUS

THOMPSON, E.H. 1986. FIELD SURVEY TO VERNON POWERLINE OF SEPT. 10.

F84THOX1VTUS

Field Survey (temporary placeholder citation)

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496

PNDZIK01VTUS

ZIKA, P.F. OREGON NATURAL HERITAGE PROGRAM.

F85THO90VTUS

Field Survey (temporary placeholder citation)

F85THO73VTUS

THOMPSON, E.H. AND P. ZIKA. 1985. FIELD SURVEY TO BLOOD- SUCKER POOL OF AUGUST 8.

**Rare Species and Significant Natural Communities
Vermont Nongame & Natural Heritage Program
Vermont Fish and Wildlife Department
Biotics Database
February 11, 2008**

SURVEYSITE Scientific Name	Common Name	Global Rank	Federal Status	State Rank	State Status	Last Observed
***** Above Vernon Dam NORTH VERNON <i>Equisetum pratense</i>	Meadow Horsetail	G5		S3		1981-06-02
NORTH VERNON FLOODPLAIN <i>Stellaria alsine</i>	Trailing Stitchwort	G5		S1		1984-09-21
***** Vernon Dam vicinity VERMONT YANKEE FLATS <i>Juncus acuminatus</i>	Tapering Rush	G5		S1		1968-08-30
VERNON <i>Panicum virgatum</i>	Switch Grass	G5		S3		1982-07-27
VERNON DAM SITE <i>Elatine minima</i>	Small Water-wort	G5		S1		1982
<i>Eragrostis frankii</i>	Frank's Love-grass	G5		S3		1982
<i>Hypericum ascyron</i>	Great St. John's-wort	G4		S2S3	T	1987-06-29
<i>Mimulus moschatus</i>	Musk Flower	G5		S2S3		1987-09-04
<i>Scirpus purshianus</i>	Pursh's Bulrush	G4G5		S2S3		1991-08-12
<i>Tillaea aquatica</i>	Pygmyweed	G5		S2		1982
<i>Zannichellia palustris</i>	Horned Pondweed	G5		S2		1982-08-22
**** Below Vernon Dam CONNECTICUT RIVER- HINSDALE/VERNON <i>Haliaeetus leucocephalus</i>	Bald Eagle	G5		S1B,S2N	E	2004-06
CONNECTICUT RIVER- VERNON <i>Hybognathus regius</i>	Eastern Silvery Minnow	G5		S3S4		1987
FIRST VERNON MEETINGHOUSE SITE						

SURVEYSITE Scientific Name	Common Name	Global Rank	Federal Status	State Rank	State Status	Last Observed
<i>Helianthus strumosus</i>	Harsh Sunflower	G5		S2S3	T	1985-08-07
STEBBINS ROAD						
<i>Bufo fowleri</i>	Fowler's Toad	G5		S1	SC	2003
VERNON DAM SITE						
<i>Eleocharis intermedia</i>	Matted Spikerush	G5		S3		1984-08-30
<i>Equisetum pratense</i>	Meadow Horsetail	G5		S3		1990-06-15
<i>Polygonatum biflorum</i> var. <i>commutatum</i>	Giant Solomon's Seal	G5T5		S1		2001-06-12
<i>Rhododendron nudiflorum</i>	Pinxter-flower	G5		S1		1965-08-03
<i>Silver Maple-Ostrich Fern</i> <i>Riverine Floodplain Forest</i>		GNR		S3		1997-09-06
VERNON FIRE DEPARTMENT SITE						
<i>Aureolaria pedicularia</i>	Feverweed	G5		S1		1982
<i>Bartonia virginica</i>	Yellow Bartonia	G5		S2		1984
<i>Carex brevior</i>	Sedge	G5?		S2		1996-08-24
<i>Cassia nictitans</i>	Wild Sensitive Plant	G5		S2		2006-08-31
<i>Hypericum gentianoides</i>	Orange-grass St. John's-wort	G5		S2		1996-08-24
<i>Lespedeza hirta</i>	Hairy Bush-clover	G5		S1	T	2006-08-31
<i>Panicum oligosanthos</i>	Few-flowered Panic-grass	G5		S2		1996-08-24
<i>Paspalum ciliatifolium</i>	Slender Paspalum	G3G5		S2		1996-08-24
<i>Polygala polygama</i>	Racemed Milkwort	G5		S2		1985-08-07
<i>Polygala verticillata</i>	Whorled Milkwort	G5		S2		1996-08-24
<i>Solidago odora</i>	Sweet Goldenrod	G5		S1	T	1983-06-29
VERNON HALL						
<i>Lechea mucronata</i>	Hairy Pinweed	G5		S1	E	1902-08-23
<i>Panicum oligosanthos</i>	Few-flowered Panic-grass	G5		S2		1984-08-30
VERNON POWERLINE SITE						
<i>Cassia nictitans</i>	Wild Sensitive Plant	G5		S2		1996-08-24
<i>Crotalaria sagittalis</i>	Rattlebox	G5		S1	T	1996-08-24
<i>Helianthemum bicknellii</i>	Plains Frostweed	G5		S2S3	T	1996-08-24

SURVEYSITE Scientific Name	Common Name	Global Rank	Federal Status	State Rank	State Status	Last Observed
<i>Helianthemum canadense</i>	Canada Frostweed	G5		S2S3		1984-08-30
<i>Nyssa sylvatica</i>	Black Gum or Tupelo	G5		S3		1984-08-30
<i>Panicum oligosanthes</i>	Few-flowered Panic-grass	G5		S2		1996-08-24

2012 Update
of
Rare and Uncommon Species Information around
Vermont Yankee

Provided by the Vermont Natural Heritage Information Project

June 2012

Panicum virgatum
Juncus acuminatus

Polygonatum biflorum

Tillaea aquatica
Eragrostis frankii
Hypericum ascyron
Zannichellia palustris
Elatine minima
Cyperus squarrosus
Elatine americana

Pilea fontana
Lycopus virginicus
Myosotis laxa
Symphotrichum racemosum

Schoenoplectus purshianus
Mimulus moschatus

Prunus pumila var. *depressa*

Carex foenea

Polygonatum biflorum

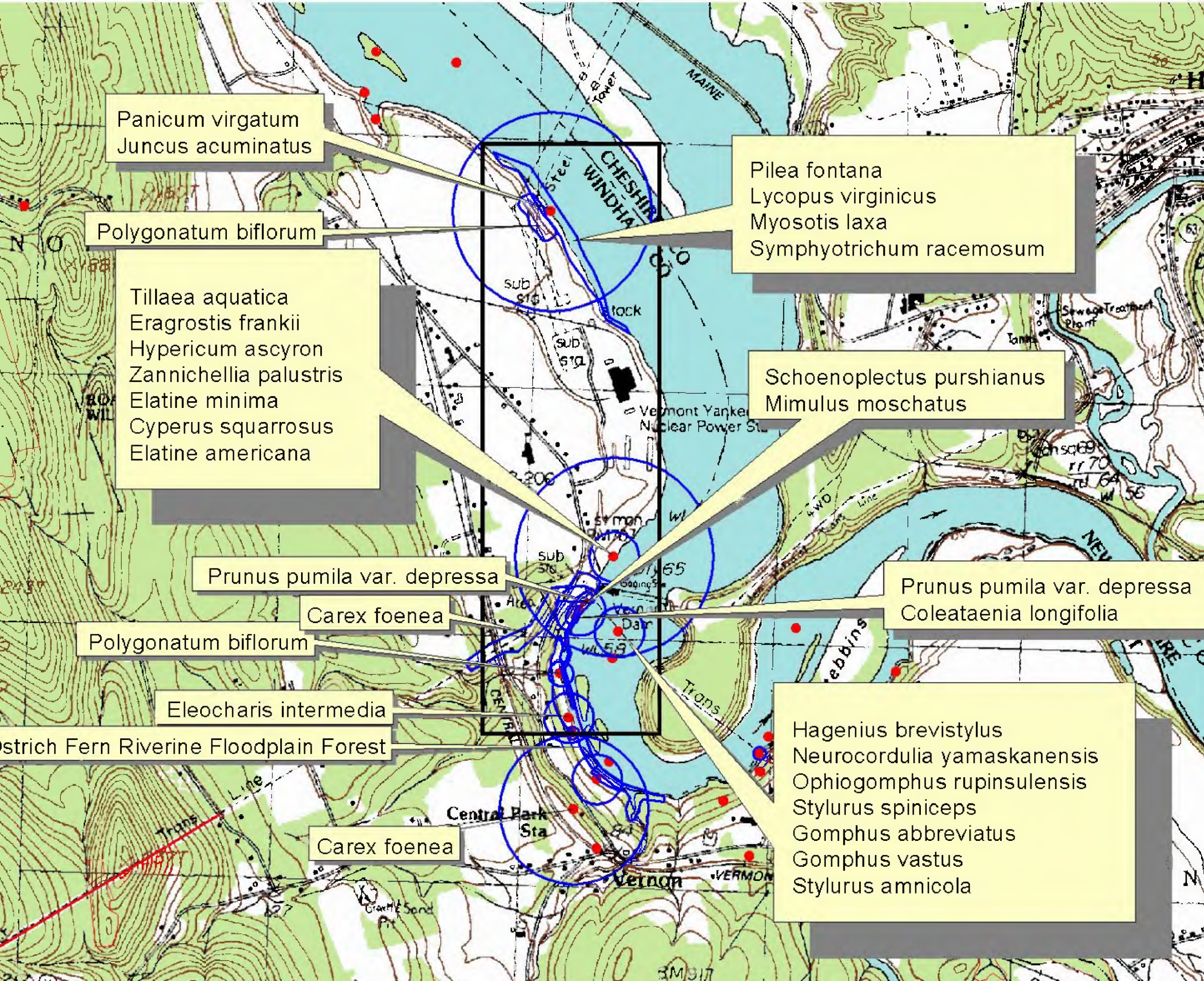
Eleocharis intermedia

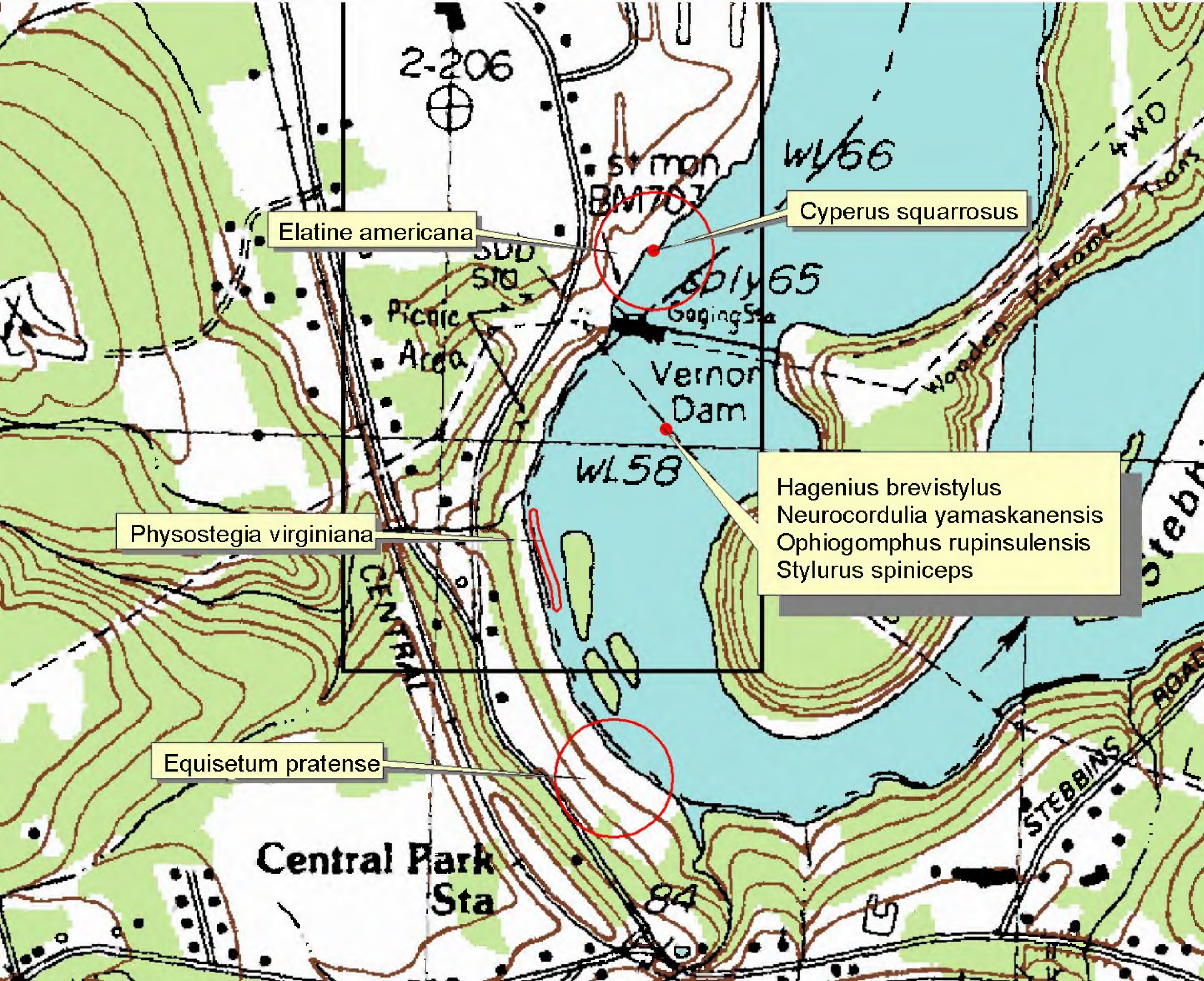
Strich Fern Riverine Floodplain Forest

Carex foenea

Prunus pumila var. *depressa*
Coleataenia longifolia

Hagenius brevistylus
Neurocordulia yamaskanensis
Ophiogomphus rupinsulensis
Stylurus spiniceps
Gomphus abbreviatus
Gomphus vastus
Stylurus amnicola





2-206

ST mon
BM 703

WL56

Elatine americana

Cyperus squarrosus

Picnic
Area

6D1165
Gaging Sta

Vernon
Dam

Wooden
Dam

Physostegia virginiana

WL58

Hagenius brevistylus
Neurocordulia yamaskanensis
Ophiogomphus rupinsulensis
Stylurus spiniceps

Equisetum pratense

Central Park
Sta

84

STEBBINS
ROAD

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Carex foenea

Bronze Sedge

EO# 13

Global Rank G5

Federal Protection Status

State Rank S1

State Protection Status E

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424548N

Longitude 723058W

Directions

1984 CENTRAL PARK: Field across road from Central Park, Vernon. 1984 ROW: Powerline S. of Vernon Dam, Vernon.

Last Survey 1984-08-30

Last Observation Date 1984-08-30

First Observation Date 1984-08-30

EO Data

1984 ROW: Specimen collected. 1984 CENTRAL PARK: Specimen collected.

EO Rank E

EO Rank Date 1984-08-30

EO Rank Comments

Additional Topics

2011: Thompson 1984 specimens identified as "Carex aenea Fernald." Visited with Tony Reznicek, so presumably good ID.

Reference Code

Citation

S84THOVTVTUS

Thompson, E. 1984. Specimen at Pringle Herbarium, University of Vermont.

Specimens

Thompson E. and T. Reznicek (771). 30 August 1984. VT.

Thompson E. and T. Reznicek (752). 30 August 1984. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Coleataenia longifolia

Redtop Panic-grass

EO# 2

Global Rank G5

Federal Protection Status

State Rank S2S3

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424609N

Longitude 723058W

Directions

1982: From Brattleboro, take Route 142 South into Vernon. Turn East on Governor Hunt Road. Drive South past the Nuke and the Vernon Dam on the Connecticut River. Just south of the Dam is a NEPCO boat access on the east side of the road, which leads to the riverbank. The Panicum is between the alluvial woods and the river at the edge of the bank.

General Description

1982: Silty alluvial woods with large cottonwoods and silver maples on the west shore of River. Plant solitary on moist or dry, flat, open, crest of a riverbank.

Minimum Elevation (ft) 210

Maximum Elevation (ft)

Last Survey 1982-08-23

Last Observation Date 1982-08-23

First Observation Date 1982-08-23

EO Data

1982: 1 plants in flower in 1 square yard. Thorough search not made.

EO Rank E

EO Rank Date 1982

EO Rank Comments

General Comments

1982: No disturbance except littering. This species needs some moisture and sun. Threat of undercutting of this section of the riverbank, however, even if plant falls into river, there is abundant habitat available. No special management required. Prior to 1982, species known from 2 historic collections in Hartland and Newfane. At least 4 stations found in 1982. Determine if this species is expanding its range in Vermont.

Additional Topics

1982: Other members of this genus at site are Panicum capillare.

Reference Code

Citation

F82ZIK99VTUS

Zika, P.F. 1982. Survey to riverbank below the Vernon Dam on 23 August 1982.

Specimens

Zika, P.F. (6513). 1982. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Elatine americana

American Waterwort

EO# 1

Global Rank GNR

Federal Protection Status

State Rank SH

State Protection Status

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424621N

Longitude 723050W

Directions

1975: In shallow water along the west shore of the Connecticut River, 0.1 mile north of Vernon Dam.

Last Survey 1975-10-04

Last Observation Date 1975-10-04

First Observation Date 1975-10-04

EO Data

1975: Occasional in patches 5 to 25 centimeters in diameter.

EO Rank H

EO Rank Date 1975

EO Rank Comments

General Comments

2004: On 3 September, Laurie Callahan also documented "Elatine triandra" 5.2km upstream of this site at Broad Brook South site, but that population has not had ID confirmed. Vegetative. Along the West shore. Bob Popp visited in 2005 with Callahan, but did not note this species. Unclear if questionable or overlooked.

Additional Topics

2012: Countryman 1975 specimen of "Elatine americana" as identified by Countryman. Note that Zika collected "Elatine minima" in 1982 from more or less the same place. Art Gilman recognizes both these collections as correctly identified in his latest Flora of Vermont draft.

Reference Code

Citation

S75COUVTVTUS

Countryman, W.D. 1975. Specimen at Pringle Herbarium, University of Vermont.

Specimens

Countryman, W.D. (2763-10). 4 October 1975. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Elatine minima

Small Water-wort

EO# 1

Global Rank G5

Federal Protection Status

State Rank S1

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424621N

Longitude 723050W

Directions

1982: Along the mud flats north of the portage above the Vernon Dam on the Connecticut River, Vernon.

General Description

Mudflats of a major river.

Minimum Elevation (ft) 221

Maximum Elevation (ft)

Last Survey 1982

Last Observation Date 1982

First Observation Date 1982

EO Data

1982: About 500 fragments or plants along the mudflats.

EO Rank E

EO Rank Date 1982

EO Rank Comments

General Comments

2004: On 3 September, Laurie Callahan also documented this species with "Elatine triandra" 5.2km upstream of this site at Broad Brook South site, but that population has not had ID confirmed. Popp noted of specimen, "ID by Barre, but not certain." As of 2009, Popp still uncertain of ID. Callahan also said ~100% certain of ID rather than 100% certain (other plants that were ~100% certain turned out to be misIDs).

Reference Code

Citation

S82ZIKVTVTUS

Zika, P.F. 1982. Specimen at Pringle Herbarium, VT.

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

Specimens

Zika, P.F. (6497). 22 August 1982. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Eleocharis intermedia

Matted Spikerush

EO# 5

Global Rank G5

Federal Protection Status

State Rank S3

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424600N

Longitude 723058W

Directions

SOUTH OF VERNON DAM. MUD FLATS 0.3 MILES SOUTH OF DAM, WEST OF SMALL ISLAND.

General Description

LOW ENERGY RIVERBANK COMMUNITY MUFLATS IN "SEASONAL" CHANNEL.

Minimum Elevation (ft) 180

Maximum Elevation (ft)

Last Survey 1984-08-30

Last Observation Date 1984-08-30

First Observation Date 1984-08-30

EO Data

1984: ABOUT 20 PLANTS SCATTERED IN A SMALL AREA OF MUD.

EO Rank E

EO Rank Date 1984-01-01

EO Rank Comments

Additional Topics

1984: Thompson not entirely confident in ID, though keyed fairly readily in Voss and Gleason & Cronquist.

Reference Code

Citation

F84THOX0VTUS

Field Survey (temporary placeholder citation)

PNDTHO01VTUS

Thompson, Elizabeth H.

F84THOW2VTUS

Field Survey (temporary placeholder citation)

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST.
BOSTON, MA 02108. TNC (617)423-9496

Specimens

THOMPSON, E.H. (754) 1984. VT

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Equisetum pratense

Meadow Horsetail

EO# 29

Global Rank G5

Federal Protection Status

State Rank S3

State Protection Status

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424552N

Longitude 723053W

Directions

South of Vernon Dam.

General Description

Fairly extensive floodplain forest below the dam. Dominated by silver maple and cottonwood, and the herb layer is dominated by ostrich fern, with nettles and others.

Minimum Elevation (ft) 200

Maximum Elevation (ft)

Last Survey 1990-06-15

Last Observation Date 1990-06-15

First Observation Date 1990-06-15

EO Data

1990: over 100 plants.

EO Rank BC

EO Rank Date

EO Rank Comments

Over 100 plants

Reference Code

Citation

F84THOW7VTUS

Field Survey (temporary placeholder citation)

PNDRAW01VTUS

RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST.
BOSTON, MA 02108. TNC (617)423-9496

PNDTHO01VTUS

Thompson, Elizabeth H.

F84THOW2VTUS

Field Survey (temporary placeholder citation)

S68COUNHVTUS

Specimen (temporary placeholder citation)

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Eragrostis frankii

Frank's Love-grass

EO# 1

Global Rank G5

Federal Protection Status

State Rank S3

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424621N

Longitude 723050W

Directions

AT VERNON TAKE GOVERNOR HUNT RD. TO PICNIC AREA ACROSS FROM DAM; FROM CANOE PORTAGE SILTY FLATS EXTEND TO THE N. 1982: W shore of Connecticut River, c. 0.3 km N of the Vernon Dam, elev. 200 feet. Mud flats on shore.

General Description

A MUD FLAT OF A MAJOR RIVER.

Minimum Elevation (ft) 220

Maximum Elevation (ft)

Last Survey 1982-08-22

Last Observation Date 1982-08-22

First Observation Date 1982-08-22

EO Data

1982: 10 plants observed. Seen in 10 places but difficult to spot among rank sedges and grasses.

EO Rank D

EO Rank Date 1982-01-01

EO Rank Comments SMALL POPULATION.

General Comments

1982 specimen: Annual, with *Cyperus strigosus*, *Cyperus squarrosus*, *Leersia oryzoides*, *Eragrostis pectinacea*, *Panicum capillare*, *Rorippa palustris*, *Panicum dichotomiflorum*, *Eleocharis obtusa*, etc.

Reference Code

Citation

F82ZIK34VTUS

Field Survey (temporary placeholder citation)

PNDZIK01VTUS

ZIKA, P.F. OREGON NATURAL HERITAGE PROGRAM.

Specimens

Zika, P.F. (6506). 22 August 1982. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Gomphus abbreviatus

Spine-crowned Clubtail

EO# 3

Global Rank G3G4

Federal Protection Status

State Rank S1S2

State Protection Status

VERNON DAM SITE

County

Topo Quad 4207275 **Latitude** 424612N **Longitude** 723049W

Directions

Vernon. Reported as "Vernon Dam - below", but coordinates provided were about 6/10 mile to the west; mapped at approximately the same latitude but moved over to river below the dam; exact location not known.

Last Survey 2005-06-10

Last Observation Date 2005-06-10

First Observation Date 2005-06-10

EO Data

2005: Documented in Blust db.

EO Rank E

EO Rank Date 2005-06-10

EO Rank Comments

Reference Code

Citation

UNDBLU01VTUS

Blust, M. Vermont Odonata Database. Green Mountain College, Poultney, Vermont.

Specimens

Morrison, F. 2005. PC (Massachusetts).

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Gomphus vastus

Cobra Clubtail

EO# 1

Global Rank G5

Federal Protection Status

State Rank S1

State Protection Status

VERNON DAM SITE

County

Topo Quad 4207275 **Latitude** 424612N **Longitude** 723049W

Directions

Vernon. Reported as "Vernon Dam - below", but coordinates provided were about 6/10 mile to the west; mapped at approximately the same latitude but moved over to river below the dam; exact location not known.

Last Survey 2005-07-06

Last Observation Date 2005-07-06

First Observation Date 2005-06-10

EO Data

2005: One seen on 10 June, two on 14 June and one on 06 July.

EO Rank E

EO Rank Date 2005-07-06

EO Rank Comments

Reference Code

Citation

UNDBLU01VTUS

Blust, M. Vermont Odonata Database. Green Mountain College, Poultney, Vermont.

Specimens

Morrison, F. 2005. PC (Massachusetts).

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Hypericum ascyron

Great St. John's-wort

EO# 24

Global Rank G4

Federal Protection Status

State Rank S2

State Protection Status T

ID Confirmed? Y

VERNON DAM SITE

VERNON POWERLINE SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424621N

Longitude 723050W

Directions

2008 POWERLINE subpopulation: [Mapped about 1.6km downstream of Dam subpopulation]. Park where powerline crosses Stebbins Road. Follow west to Connecticut River. Plants in small rivershore grassland beneath powerline with gauging station nearby. 2005 DAM subpopulation: Park at Vernon Dam Portage Area off Governor Hund Road. Walk down path to the water. Bushwhack to the left (just before the water edge) through brambles and a very wet/swampy area. Plants are on the river's side of the swampy area, on the edge of the fence (fence is motion detected, do not touch the fence) best to contact Entergy even though plants are not on their property but are on TransCanada property (formerly USGEN). Also can be accessed though the back yard of house #268, follow Entergy fence to swamp. 1987 DAM subpopulation: Just north of dam.

General Description

1987: Wetland back of sandy shore, just north of dam. Wetland is rich with robust vegetation.

Minimum Elevation (ft) 232

Maximum Elevation (ft) 262

Last Survey 2010

Last Observation Date 2010

First Observation Date 1987-06-29

EO Data

2008 POWERLINE: Circa 30+ clumps just beginning to flower in a 20x20 area. 2005 DAM: Total of 9 stems in 18 square feet. 3 in flower, 1 in fruit, all others vegetative. 1987 DAM: A large, robust population- ca. 100-500 plants in flower and fruit, 4-5 feet tall growing 20 feet back from shore, full sun, sometimes inundated.

EO Rank BC

EO Rank Date 2008-07-09

EO Rank Comments

2008: Popp ranked BC for Powerline subpopulation only. Small population in a small area of appropriate habitat. Marcus rank of BC for entire population, as upper population may also be smaller, or at least have greatly fluctuating numbers. 1987-01-01 DAM: AB rank. HEALTHY PLANTS, LARGE POPULATION

General Comments

2008 POWERLINE: Plants likely to persist if open aspect is maintained by flooding and scour. Threats are trampling by anglers and herbiciding. Associated with *Ulmus americana* (saplings), *Cornus sericea*, *Toxicodendron radicans*, *Hypericum punctatum*, *Apios*, *Sisymbrium*, *Panicum* sp. 2005 DAM: Associated with *Rubus allegheniensis*, *Celastrus orbiculatus*, *Scutellaria integrifolia*.

Management Comments

2008 POWERLINE: Determine the nature of gauging station. 2005 DAM: Likely the plant will be overtaken by *Celastrus* and blackberry. Remove *Celastrus* and clear area of blackberry.

Owner

TransCanada

Entergy

National Grid

Owner Note

2005 DAM: 603-445-6802

2008 POWERLINE: National Grid manages. Contact is John Cookson

Owner Comments

2008 POWERLINE: Gauging station had phone number to contact of 258-5502. 2005: Plants not on Entergy property, but they should be informed of survey for security purposes--fence is motion sensed. TransCanada owns the Vernon Dam.

Reference Code	Citation
F87THO07VTUS	THOMPSON, E. H. 1987. FIELD SURVEY TO VERNON DAM, JUNE 29.
U05KAN02VTUS	Kane, A., C. Wilfong, D. Dyer, E. Haney, K. Langlais, M. Whittlesey, and R. Rembisz. 2005. PCV rare plant form for Hypericum ascyron at Vernon Dam on 6 September 2005. Vermont Nongame and Natural Heritage Program.
U04WIL01VTUS	Wilfong, Cheryl and Alice Charkes. 2004. PCV Rare Plant Form for Hypericum ascyron at Vernon Dam, Vernon, Vermont on 20 July 2004. Vermont Nongame and Natural Heritage Program.
U10SKU03VTUS	Skuly, Barbara and Cheryl Wilfong. 2010. Rare plant form for Hypericum ascyron at Vernon Dam, Vernon, Vermont in 2010. The Vermont Natural Heritage Inventory.
F08POP37VTUS	Popp, R., Matt Hickler (consultant), John Cookson (National Grid), Jeff Taylor (Veg Control Service) et al. 2008. Survey to Vernon Powerline Site, Vermont, on 9 July 2008. Vermont Natural Heritage Program.

Specimens

Popp, R. (1571). 9 July 2008. PC.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Juncus acuminatus

Tapering Rush

EO# 1

Global Rank G5

Federal Protection Status

State Rank S1

State Protection Status

ID Confirmed? Y

VERMONT YANKEE FLATS

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424706N

Longitude 723101W

Directions

Vernon, frequent in marsh adjacent to the west shore of the Connecticut River approx. 1 mile north of Vernon Dam.

Minimum Elevation (ft) 236

Maximum Elevation (ft)

Last Survey 1968-08-30

Last Observation Date 1968-08-30

First Observation Date 1968-08-30

EO Data

1968: A single collection on 30 August. Frequent in marsh.

EO Rank H

EO Rank Date

EO Rank Comments

Additional Topics

1968: Originally det. as *J. acuminatus*; annotated by F.C. Seymour as same, "seeds without tails."

Specimens

Countryman, Wm. D. (1909) 25 July 1968. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Lycopus virginicus

Virginia Bugleweed

EO# 10

Global Rank G5

Federal Protection Status

State Rank S2

State Protection Status

VERMONT YANKEE FLATS

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424702N

Longitude 723058W

Directions

1969: Along the edge of a marsh adjacent to the west shore of the Connecticut River approximately 1.0 miles north of Vernon Dam.

Last Survey 1969-09-07

Last Observation Date 1969-09-07

First Observation Date 1969-09-07

EO Data

1969: Occasional along the edge of a marsh.

EO Rank H

EO Rank Date 1969

EO Rank Comments

General Comments

Vermont Yankee was built in 1972.

Additional Topics

2011: Countryman specimen ID should be confirmed.

Reference Code

Citation

S69COUVTVTUS

Countryman, William D. 1969. Specimen at VT.

Specimens

Countryman, William. (2155). 7 September 1969. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Mimulus moschatus

Musk Flower

EO# 3

Global Rank G5

Federal Protection Status

State Rank S2S3

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424614N

Longitude 723056W

Directions

1987: SEEPAGE AREA JUST BELOW THE DAM

General Description

SEEPAGE AREA, CONTINUALLY MOIST. FULL SUN.

Minimum Elevation (ft) 180

Maximum Elevation (ft)

Last Survey 2006-07-05

Last Observation Date 1987-09-04

First Observation Date 1987

EO Data

2006: No traces of plant found on 5 July. 2001: No plants observed by Plant Conservation Volunteer on 14 August. 1991: no plants observed after thorough search on 14 August. 1990: NO PLANTS OBSERVED. 1987: ONE CLUMP WITH 5 STEMS.

EO Rank E

EO Rank Date 1991-01-01

EO Rank Comments Estimate of State Rank.

General Comments

2006: Searched seepage area just below the dam. Lots of human activity, which could have easily wiped the plant(s) out over the years since 1987. 2001: Area searched was just below dam near a culvert and a little farther downstream on two islands.

Reference Code

Citation

U06CHA01VTUS

Charkes, A., C. Wilfong, and R. Rembisz. 2006. PCV rare plant form for *Mimulus moschatus* at Vernon Dam in Vernon Vermont, on 5 July 2006. Vermont Nongame and Natural Heritage Program.

F01CLA02VTUS

Clarkes, A. 2001. Field visit to Vernon Dam of 14 August 2001. NEPCoP field form.

PNDPOP01HQUS

Popp, Robert. Heritage Coordinator/Botanist, Vermont Natural Heritage Information Project (formerly the Vermont Nongame and Natural Heritage Program). Personal communication.

F87THO21VTUS

THOMPSON, E.H. 1987. FIELD SURVEY TO VERNON DAM OF SEPT. 4

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Myosotis laxa

Smaller Forget-me-not

EO# 5

Global Rank G5

Federal Protection Status

State Rank S2

State Protection Status

VERMONT YANKEE FLATS

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424702N

Longitude 723058W

Directions

1967: In a swamp adjacent to the west shore of the Connecticut River approximately 1.0 miles north of Vernon Dam.

Last Survey 1967-06-29

Last Observation Date 1967-06-29

First Observation Date 1967-06-29

EO Data

1967: Specimen collected in swamp.

EO Rank H

EO Rank Date 1967

EO Rank Comments

General Comments

Vermont Yankee was built in 1972.

Additional Topics

2011: Countryman specimen ID should be confirmed.

Reference Code

Citation

S69COUVTVTUS

Countryman, William D. 1969. Specimen at VT.

Specimens

Countryman, William. (1644). 29 June 1967. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Panicum virgatum

Switch Grass

EO# 3

Global Rank G5

Federal Protection Status

State Rank S3

State Protection Status

VERMONT YANKEE FLATS

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424706N

Longitude 723101W

Directions

Vernon. Countryman's 1969 coll.: occasional at the edge of a marsh adjacent to the west shore of the Connecticut River approx. 1.0 mi. north of Vernon Dam. 1898 coll. open ground.

Minimum Elevation (ft) 280

Maximum Elevation (ft)

Last Survey 1982-07-27

Last Observation Date 1982-07-27

First Observation Date 1898

EO Data

Several collections from this town - Zika's 1982 coll at VT, Robinson's 1898 coll at NEBC, 1969 coll !

EO Rank E

EO Rank Date

EO Rank Comments

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Physostegia virginiana

Obedient Plant

EO# 25

Global Rank G5

Federal Protection Status

State Rank S2

State Protection Status T

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424604N

Longitude 723058W

Directions

2010: Park at recreational parking area just south of dam. Follow riverbank south to back-channel. Plants are on steep riverbank and on gravel bar in back-channel.

General Description

2010: Gravel bar in major river. Plants often inundated (daily?). Site is rather shady for this species.

Last Survey 2010-09-06

Last Observation Date 2010-09-06

First Observation Date 2010-09-06

EO Data

2010: 200 ramets in small groups in mature fruit. Plants stoloniferous--flowering stems are short (<0.5m). Most plants appearing only as vegetative rosettes.

EO Rank CD

EO Rank Date 2010

EO Rank Comments

2012: Marcus ranks CD. Tenuous habitat, but may be more up or down stream, and may persist. 2010: Gilman suggests D rank. Small, tenuous, shifting habitat.

General Comments

2010: Plants on riverbank are less apparent. Associated with *Lycopus virginicus* (bank). No others on gravel bar. Threat from major floods.

Reference Code

Citation

F10GIL05VTUS

Gilman, A.V. 2010. Rare plant form for *Physostegia virginiana* at Vernon Dam, Vernon, Vermont on 6 September 2010. Vermont Natural Heritage Inventory.

Specimens

Gilman A.V. (101). 6 September 2010. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Pilea fontana

Black-seeded Clearweed

EO# 1

Global Rank G5

Federal Protection Status

State Rank SH

State Protection Status

ID Confirmed? Y

VERMONT YANKEE FLATS

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424702N

Longitude 723058W

Directions

1968: In a marsh adjacent to the west shore of the Connecticut River approximately 1.0 miles north of Vernon Dam.

Last Survey 1968-08-29

Last Observation Date 1968-08-29

First Observation Date 1968-08-29

EO Data

1968: Occasional in marsh.

EO Rank H

EO Rank Date 1968

EO Rank Comments

General Comments

Vermont Yankee was built in 1972.

Additional Topics

2003: Herbarium Recovery Project confirmed 1968 specimen as *Pilea fontana*. Primary determination of *Pilea pumila* var. *pumila*.

Reference Code

Citation

S68COUVTVTUS

Countryman, W.D. 1968. Specimen at Pringle Herbarium, University of Vermont.

Specimens

Countryman, William. (1904). 29 August 1968. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Polygonatum biflorum

Common Solomon's-seal

EO# 1

Global Rank G5

Federal Protection Status

State Rank S1

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424706N

Longitude 723104W

Directions

2008 VT YANKEE: Along fenceline at [northeastern edge of] Vermont Yankee. Access via dirt road between cornfield and fence [where Route 142 crosses] railroad tracks. 2008 DAM: Below dam just south of where Governor Hunt Road rejoins Route 142. Behind Thomas (yellow ranch house). At woods line just south of southwest corner of Thomas house at top of bank. 1997 DAM: In big cottonwood portion of floodplain forest on NEPC land, a very short distance (50m) south of stream entering river. Stream is south of picnic/beach area. 1994 DAM subpopulation: Brumback believes at same site as seen by Thompson (1984), but not sure. Plants are growing well south of the Vernon Dam on the edge of the woods, 4ft. back from an open field. In a 10 sq. ft area.

General Description

Dam subpopulation: Fairly extensive floodplain forest below the dam. Dominated by silver maple and cottonwood, and the herb layer is dominated by ostrich fern, with nettles and others.

Minimum Elevation (ft) 200

Maximum Elevation (ft)

Last Survey 2008-07-10

Last Observation Date 2008-07-10

First Observation Date 1895

EO Data

2008 DAM: 1 fruiting plant at woods line on 10 July [mapped in new area between 1984 and 1997 locations]. 2008 VT YANKEE: Total of 10 genets in 5 locations along fenceline on 10 July from north to south as follows. 2 vegetative plants circa 50 feet beyond corner of fence circa 8 feet below path; 3 plants with fruit and 1 vegetative plants circa 30 feet past 2nd jog in fence and 15 feet below path; 1 plant with fruit and 1 vegetative plant circa 100 feet past 2nd jog in fence and 6 feet below path; 1 vegetative plants circa 100 feet before 3rd jog in fence; 1 vegetative plants circa 50 feet before 3rd jog in fence. 2008 VT YANKEE: Volunteers did not locate on 19 June. 2006 VT YANKEE: Not found. 2006 DAM subpopulations: 6 vigorous genets observed in flower on 4 June. Four were on the trail in a shaded, moist environment. Two were in the sun close to the roadside at the start of the trail. 2001 VT YANKEE: Plants occur at 7 locations [listed from north to south] totaling about 157 plants although many of these are likely ramets. Site 1: By fence corner within 5 feet of mowed edge- 16 vegetative plants (one mature plant, others all small). Site 2: Begins 50 feet beyond fence corner, extends 20 feet down the slope toward the path (60 plants). Site 3: About 150 feet beyond the fence corner about 20 feet before the beginning of the tower (15 plants, 12 large plants in flower, the other 3 small and vegetative). Site 4: Midway between the jogs in the fenceline (2 plants both in flower). Site 5: 70 to 100 feet beyond the previous population (about 30 small, vegetative plants). Site 6: 50 feet beyond the 2nd jog in the fence line (4 plants, 1 in flower, the others vegetative). Site 7: About 50 feet before the 3rd jog in the fence line- 30 small vegetative plants. 2001 DAM sub-sites: (5 sub-sites). Site 1: Along edge of field by red blazed (barely visible blazing) 49 cm dbh elm with Parthenocissus on the trunk (16 plants- 10 in flower, 6 vegetative). Site 2: Approximately 75 feet north by dead elm covered with Vitis (7 plants- 3 in flower and 4 vegetative). Site 3: Another 75 feet north, approximately 30 feet south of huge cottonwood (4 vegetative plants). Site 4: About 90 feet north of huge cottonwood beneath sumac (11 plants- 3 in flower and 8 vegetative). Site 5: In woods behind the hedgerow on the side of the trail closest to the river (5 vegetative plants). 1999 DAM: Plant not found. Searched along the path, 10' on either side, for at least 1 mile south of the dam. 1997 DAM: 1 genet composed of 2 ramets observed in fruit in the large cottonwood portion of the floodplain forest [mapped in new area further north]. 1994 VT YANKEE: Total of 8 stems in two locations along east edge of fence line. 6 stems with fruit at 3ft south of corner post where the fence turns south and 4 feet toward river off the mown way. 2 without fruits further down east side of fence, mapped 31 paces south of 2nd jog in fence. 1994 DAM: 7 stems in 10 square feet. 2 with mature fruit, 1 with aborted fruit, and 4 immature. 1993 DAM: one plant observed [by Brumback?], no fruit or flower evident. 1990 DAM: 8 plants, in bud and in flower. 1984 DAM: 1+ fruiting plant in 1 square yard in shady woods. Thorough survey not done. Reports that Countryman previously described species occasional.

EO Rank B

EO Rank Date 2008-07-10

EO Rank Comments

2007: Popp ranked B. Small population, but have been known from site for a long time. 1998-01-01: C State Rank. Largest extant population in the state.

General Comments

2006 Vermont Yankee: Trees have been cut down where these plants were [in 1994], changing the habitat from shaded to open. Rembisz speculates that the plants got trampled during the cutting. 2001 Vermont Yankee: Associated with *Acer saccharum*, *Tilia*, *P. virginiana*, *R. odoratus*, *Vitis*, *S. racemosa*, *V. canadensis*, *Arisaema*, *S. flexuosa*, *U. dioica*, *C. sprengelli*.

Additional Topics

2008: Both *Polygonatum pubescens* and *Smilacina* also occur at site, and have similar appearance. 2006: Charkes writes "Why isn't it *canaliculatum*?...Could it be *Polygonatum pubescens* or *biflorum*?" Photos with Rembisz? 2001: Small, sterile individuals are hard to distinguish from *Uvularia* spp. *Uvularia* has sessile, non-clasping leaves with narrow, white branching rhizomes and a zig-zag stem. Leaves of *Polygonatum* are slightly clasping and the rhizomes are large and white with a round mark. *Smilacina stellata* also has large, white rhizomes but further back from the tip it becomes brown. 1994: Seed collected on 13 September from Vermont Yankee and Vernon Dam subpopulations by Brumback and Countryman. Good time to collect.

Management Comments

2008: Contact both VT Yankee and Thomas. Threat of additional clearing by VT Yankee. At Dam subpopulation, brush and limbs were pushed over the bank in the vicinity of plants behind Thomas house. 2006 DAM: If trail were to be mowed too wide, it would take out some plants. 2001: Vermont Yankee population seems to be fine, monitor periodically. Plants at Vernon Dam show signs of browsing, some with the tops chewed off (presumably by deer). 1994: Vermont Yankee subpopulation threatened by use of herbicides and mowing along fenceline. Dam subpopulation has trees around it with flagging and some cutting. 1999 DAM: Logging in this area with a fair amount of disturbance.

Owner

NEW ENGLAND POWER COMPANY

Vermont Yankee

Thomas

2008: Lynn Dewald is contact.

2008: Yellow ranch house just south of where Gov Hunt Rd rejoins Rte 142.

Reference Code

Citation

U99CHA02VTUS	Charkes, A. 1999. Rare plant occurrence reporting form for <i>Polygonatum biflorum</i> var. <i>commutatum</i> . Vermont Nongame and Natural Heritage Program.
U94BRU01VTUS	Brumback, B. and Bill Countryman. 1994. Field Survey and seed collection at Vernon Dam of 13 September 1994.
PNDBRU01VTUS	Brumback, William E. Conservation Director New England Wildflower Society. Framingham, MA.
PNDTHO01VTUS	Thompson, Elizabeth H.
F01POP04VTUS	Popp, R. and D. Allard. 2002. Field visit to Vernon Dam and Vermont Yankee of 12 June 2001.
N97ENG02VTUS	Engstrom, Brett. 1997. Field Inventory of Vernon Dam Site on 6 September 1997.
U94POP02VTUS	Popp, Robert. 1994. Field Survey to Vernon Dam of 29 September 1994.
U98SOR03VTUS	Sorenson, E. et al. 1998. Floodplain Forests of Vermont, Some Sites of Ecological Significance. Prepared for the Vermont Nongame and Natural Heritage Program.
PNDPOP01VTUS	Popp, Robert G. Botanist. Vermont Natural Heritage Information Project (formerly the Vermont Nongame and Natural Heritage Program).
F84THOW7VTUS	Field Survey (temporary placeholder citation)
F84THOW2VTUS	Field Survey (temporary placeholder citation)
PNDRAW01VTUS	RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496
S68COUNHVTUS	Specimen (temporary placeholder citation)
U06CHA02VTUS	Charkes, A., C. Wilfong, and R. Rembisz. 2006. PCV rare plant form for <i>Polygonatum biflorum</i> var. <i>commutatum</i> at the Vernon Dam on 4 June 2006. Vermont Nongame and Natural Heritage Program.
U06REM04VTUS	Rembisz, R. , A. Charkes, and C. Wilfong. 2006. PCV rare plant form for <i>Polygonum biflorum</i> var. <i>commutatum</i> from Miller's Field at the Vernon Dam site, presumably from 2006. Vermont Nongame and Natural Heritage Program.
F08POP31VTUS	Popp, R. 2008. Rare plant form for <i>Polygonatum commutatum</i> at Vernon Dam and Vermont Yankee, Vernon, Vermont, on 10 July 2008. Vermont Natural Heritage Program.
U94BRU03VTUS	Brumback, B. and Bill Countryman. 1994. Field Survey and seed collection at Vermont Yankee of 13 September 1994.
U08CHA02VTUS	Charkes, Alice and Ron Rembiez. 2008. PCV Rare Plant Form for <i>Polygonatum biflorum</i> var. <i>commutatum</i> at Millersfield-Vernon Dam, Vernon, Vermont on 19 June 2008. Vermont Nongame and Natural Heritage Program.

Specimens

Thompson, E. (743) 1984. VT

Countryman, W. (1758) 1968. NH

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Prunus pumila var. *depressa*

Low Sand Cherry

EO# 10

Global Rank G5T5

Federal Protection Status

State Rank S2

State Protection Status

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424615N

Longitude 723057W

Directions

1968: Vernon. West side of Connecticut River ca. 100 meters below Vernon Dam.

Last Survey 1968-07-30

Last Observation Date 1968-07-30

First Observation Date 1968-07-30

EO Data

1968: Collection on 30 July.

EO Rank H

EO Rank Date

EO Rank Comments

Additional Topics

Countryman specimen determined by A. Marcus 4/5/2007.

Reference Code

Citation

S68COUVTVTUS

Countryman, W.D. 1968. Specimen at Pringle Herbarium, University of Vermont.

Specimens

Countryman, W.D. (s.n.). 1968. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Schoenoplectus purshianus

Pursh's Bulrush

EO# 2

Global Rank G4G5

Federal Protection Status

State Rank S3

State Protection Status

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424614N

Longitude 723056W

Directions

South of Vernon Dam. Sand flat about 0.1 miles below dam.

General Description

A seepage community provided by a small stream which comes down just below the dam. In open cobbly area, somewhat damp.

Minimum Elevation (ft) 180

Maximum Elevation (ft)

Last Survey 1991-08-12

Last Observation Date 1991-08-12

First Observation Date 1984

EO Data

1991: one clump with 14 culms observed, most with 1 to 4 spikelets. 1990: no plants observed although 3 sterile unidentifiable plants in this genus were observed. 1987: 1 clump of 20 stems, recumbent. 1984: about 5 plants seen.

EO Rank C

EO Rank Date

EO Rank Comments

Just one clump.

General Comments

Plants are inconspicuous when sterile, so there may be more. Surveyor cannot distinguish this from *S. smithii*. 1984: Assoc: *Cyperus esculentus*, *Lythrum salicaria*, *Lindernia dubia*.

Owner

NEPCO

Reference Code

Citation

PNDPOP01VTUS

Popp, Robert G. Botanist. Vermont Natural Heritage Information Project (formerly the Vermont Nongame and Natural Heritage Program).

F91POP10VTUS

Popp, R.G. 1991. Field Survey to Vernon Dam of 19 August. Vermont Nongame and Natural Heritage Program.

Specimens

Thompson. (753). VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Silver Maple-Ostrich Fern Riverine Floodplain Forest

EO# 29

Global Rank GNR

State Rank S3

ID Confirmed? Y

VERNON DAM SITE

County	Town
Windham	Vernon

Topo Quad 4207275 **Latitude** 424559N **Longitude** 723057W

Directions

South of Vernon Dam; immediately downstream of the NEPCO recreation parking lot.

General Description

This narrow strip of floodplain forest occupies the outer side of the very sharp bend of the Connecticut River immediately below Vernon Dam.

Minimum Elevation (ft) 190 **Maximum Elevation (ft)** 190

Last Survey 1997-09-06 **Last Observation Date** 1997-09-06 **First Observation Date** 1990

EO Data

1997: The forest on the mainland contains some very large cottonwood (*Populus deltoides*) mixed with smaller silver maple (*Acer saccharinum*), both ranging in age from 60-75 years. While shrubs and saplings are sparse, the groundcover vegetation is quite lush with a great deal of variation in species composition and distribution. While the areas most distant from the river are dominated by ostrich fern (*Matteuccia struthiopteris*), areas close to the river have white snakeroot (*Eupatorium rugosum*), poison ivy (*Toxicodendron radicans*), and white-grass (*Leersia virginica*) as important species. Although having significant accumulations of fresh sand and litter alluvium, this zone nearest to the river is not built up as a levee, which normally would be found in this position relative to the river.

A couple stems of giant Solomon's seal were observed in this floodplain forest. Though this variety of Solomon's seal is currently in question, it is nonetheless extremely rare in Vermont.

EO Rank C **EO Rank Date** 1997-09-06

EO Rank Comments State rank. Good example but moderate in size.

General Comments

1997 Engstrom: There is an adjacent island which adds about another five acres to the community. Being in the Connecticut River, the island is technically part of New Hampshire and was not visited as part of this study.

Management Comments

1997 Engstrom: The presence of the dam immediately upstream has undoubtedly significantly changed the flooding regime at this site. A public access beach at the very north end of the site has such heavy visitor use that the groundcover vegetation is almost non-existent. ATV use of the trail through the floodplain forest has impacted the vegetation. Given the presence of the giant Solomon's seal in this area, it is recommended that this trail be closed to ATV use.

Owner

NEW ENGLAND POWER COMPANY

Reference Code	Citation
N97ENG02VTUS	Engstrom, Brett. 1997. Field Inventory of Vernon Dam Site on 6 September 1997.
U98SOR03VTUS	Sorenson, E. et al. 1998. Floodplain Forests of Vermont, Some Sites of Ecological Significance. Prepared for the Vermont Nongame and Natural Heritage Program.
F90THOW7VTUS	Thompson, Elizabeth. 1990. Memorandum to the Nongame and Natural Heritage Program dated 9 July 1990.
F84THOW2VTUS	Field Survey (temporary placeholder citation)
PNDRAW01VTUS	RAWINSKI, THOMAS J. NEW ENGLAND REGIONAL HERITAGE PROGRAM, 294 WASHINGTON ST. BOSTON, MA 02108. TNC (617)423-9496
PNDTHO01VTUS	Thompson, Elizabeth H.
S68COUNHVTUS	Specimen (temporary placeholder citation)

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Stylurus amnicola

Riverine Clubtail

EO# 2

Global Rank G4

Federal Protection Status

State Rank S1

State Protection Status

VERNON DAM SITE

County

Topo Quad 4207275 **Latitude** 424612N **Longitude** 723049W

Directions

Vernon. Reported as "Vernon Dam - below", but coordinates provided were about 6/10 mile to the west; mapped at approximately the same latitude but moved over to river below the dam; exact location not known.

Last Survey 2005-07-15

Last Observation Date 2005-07-15

First Observation Date 2005-07-06

EO Data

2005: Fifteen seen on 06 July, 8 on 11 July, and 3 on 15 July.

EO Rank E

EO Rank Date 2005-07-15

EO Rank Comments

Reference Code

Citation

UNDBLU01VTUS

Blust, M. Vermont Odonata Database. Green Mountain College, Poultney, Vermont.

Specimens

Morrison, F. 2005. PC (Massachusetts).

Morrison, F. 2005. Green Mountain College (M. Blust)

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Symphyotrichum racemosum

Small White Aster

EO# 6

Global Rank G4G5

Federal Protection Status

State Rank S1

State Protection Status

VERMONT YANKEE FLATS

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424702N

Longitude 723058W

Directions

1968: At the edge of a marsh adjacent to the west shore of the Connecticut River approximately 1.0 miles north of Vernon Dam.

Last Survey 1968-09-10

Last Observation Date 1968-09-10

First Observation Date 1968-09-10

EO Data

1968: Occasional at the edge of a marsh.

EO Rank H

EO Rank Date 1968

EO Rank Comments

General Comments

Vermont Yankee was built in 1972.

Additional Topics

2011: Countryman specimen ID should be confirmed.

Reference Code

Citation

S68COUVTVTUS

Countryman, W.D. 1968. Specimen at Pringle Herbarium, University of Vermont.

Specimens

Countryman, William. (1918). 10 September 1968. VT.

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Tillaea aquatica

Pygmyweed

EO# 2

Global Rank G5

Federal Protection Status

State Rank S1

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424621N

Longitude 723050W

Directions

AT VERNON TAKE GOVERNOR HUNT RD. TO PICNIC AREA ACROSS FROM DAM; FROM CANOE PORTAGE SILTY FLATS
EXTEND TO THE N.

General Description

A MUD FLAT OF A MAJOR RIVER.

Minimum Elevation (ft) 220

Maximum Elevation (ft)

Last Survey 1982-08-22

Last Observation Date 1982

First Observation Date 1982-08-22

EO Data

1982: 15 PLANTS SEEN GROWING WITH ELEOCHARIS ACICULARIS, ELATINE MINIMA, AND EXOTIC WEEDS.

EO Rank E

EO Rank Date 1982-01-01

EO Rank Comments MORE INVESTIGATION NEEDED.

Reference Code

Citation

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

F82ZIK33VTUS

Field Survey (temporary placeholder citation)

**Vermont Natural Heritage Inventory
Vermont Fish & Wildlife Department
Element Occurrence Report**

Zannichellia palustris

Horned Pondweed

EO# 1

Global Rank G5

Federal Protection Status

State Rank S2

State Protection Status

ID Confirmed? Y

VERNON DAM SITE

County

Windham

Town

Vernon

Topo Quad 4207275

Latitude 424621N

Longitude 723050W

Directions

1982: VERNON DAM PORTAGE. MUDFLATS JUST ABOVE DAM. Washed up on shore of the Connecticut River at the Vernon Dam, Vernon.

General Description

MAJOR RIVER. PLANTS FOUND ON MUDFLATS.

Minimum Elevation (ft) 221

Maximum Elevation (ft)

Last Survey 1982-08-22

Last Observation Date 1982-08-22

First Observation Date 1982

EO Data

1982: 2 FERTILE PLANTS WASHED UP ON SHORE. ROOTED COLONY NOT SEEN.

EO Rank E

EO Rank Date 1982-01-01

EO Rank Comments

NO ROOTED PLANTS SEEN

General Comments

COLONY SHOULD BE SOUGHT.

Additional Topics

2012: Colony may be in New Hampshire waters only.

Reference Code

Citation

F84ZIK36VTUS

ZIKA, P.F. 1982. FIELD SURVEY TO VERNON DAM PORTAGE OF AUGUST 22, 1984.

PNDZIK01VTUS

ZIKA,P.F. OREGON NATURAL HERITAGE PROGRAM.

Specimens

Zika, P.F. (6496). 22 August 1982. VT.

Partial List of Uncommon Species below Vernon Dam
Vermont Natural Heritage Inventory
25 June 2012

<i>Hagenius brevistylus</i>	Dragonhunter	Vernon Dam - below
2007-08-31	Hemeon, Kevin	Blust Db Record Number: 6345. Elevation: 210. Total Seen: . Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: 1. Adult: Y. Skin: N. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Green Mountain College - M. Blust.
2007-08-31	Hemeon, K.	Blust Db Record Number: 6346. Elevation: 210. Total Seen: . Males Seen: . Females Seen: . Number Males Vouchered: 1. Number Females Vouchered: . Adult: Y. Skin: N. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Green Mountain College - M. Blust.
2006-08-31	Pfeiffer, Bryan	Blust Db Record Number: 5757. Elevation: 210. Total Seen: . Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: . Adult: Y. Skin: N. Nymph: N. Site Type: . ID Type: Sight. Deposition: .
<i>Ophiogomphus rupinsulensis</i>	Rusty Snaketail	Vernon Dam - below
2005-06-10	Morrison, Fred	Blust Db Record Number: 4886. Elevation: 210. Total Seen: 9. Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: . Adult: N. Skin: Y. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Morrison, Fred - Massachusetts.
<i>Neurocordulia yamaskanensis</i>	Stygian Shadowdragon	Vernon Dam - below
2005-06-14	Morrison, Fred	Blust Db Record Number: 4890. Elevation: 210. Total Seen: 6. Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: . Adult: N. Skin: Y. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Morrison, Fred - Massachusetts.
2005-06-10	Morrison, Fred	Blust Db Record Number: 4887. Elevation: 210. Total Seen: 6. Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: . Adult: N. Skin: Y. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Morrison, Fred - Massachusetts.
<i>Stylurus spiniceps</i>	Arrow Clubtail	Vernon Dam - below
2007-09-22	Hemeon, Kevin	Blust Db Record Number: 6351. Elevation: 210. Total Seen: . Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: 1. Adult: Y. Skin: N. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Green Mountain College - M. Blust.
2005-07-06	Morrison, Fred	Blust Db Record Number: 4895. Elevation: 210. Total Seen: 12. Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: . Adult: N. Skin: Y. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Morrison, Fred - Massachusetts.
2005-07-11	Morrison, Fred	Blust Db Record Number: 4898. Elevation: 210. Total Seen: 36. Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: . Adult: N. Skin: Y. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Morrison, Fred - Massachusetts.
2005-07-15	Morrison, Fred	Blust Db Record Number: 4900. Elevation: 210. Total Seen: 10. Males Seen: . Females Seen: . Number Males Vouchered: . Number Females Vouchered: . Adult: Y. Skin: N. Nymph: N. Site Type: . ID Type: Voucher. Deposition: Morrison, Fred - Massachusetts.

Cyperus squarrosus

Awned Cyperus

Vernon Dam Site

1982 Zika

1982-08-22	Peter Zika	Observed as an associated species of <i>Eragrostis frankii</i> . <i>Eragrostis</i> was seen in 10 places, but difficult to spot among rank sedges and grasses, with <i>Cyperus strigosus</i> , <i>Cyperus squarrosus</i> . W shore of Connecticut River, c. 0.3 km N of the Vernon Dam, elev 200 feet. mud flats on the shore.
1984-08-30	Liz Thompson and Tom Rawinski	<i>Cyperus aristatus</i> observed in survey of shore south from Vernon Dam to Stebbins Road Powerline.
1985-08-21	Liz Thompson and Jerry Jenkins	" <i>Cyperus inflexus</i> " observed on east bank of Stebbins Island (in New Hampshire?)

Vermont Natural Heritage Inventory
Vermont Fish and Wildlife Department
Element Occurrence Near Vermont Yankee
Record Creation and Revision Dates
June 2012

EO_ID	SCIENTIFIC_NAME	EO_CREATE_DATE	EO_REVISED_DATE	REVISED_SHAPE
9032	Carex foenea	11/30/2011		
8177	Coleataenia longifolia	3/3/2010		
9221	Elatine americana	2/28/2012		
4623	Elatine minima	4/1/1985	2/28/2012	
2925	Eleocharis intermedia	11/18/1992		
5392	Equisetum pratense	4/1/1991		
1011	Eragrostis frankii	7/27/1983	3/5/2010	
8410	Gomphus abbreviatus	5/18/2010		9/7/2010
8506	Gomphus vastus	5/27/2010		9/7/2010
4034	Hypericum ascyron	6/25/1991	3/9/2012	3/11/2010
2258	Juncus acuminatus	7/8/1991	3/5/2010	
9149	Lycopus virginicus	1/12/2012		
1809	Mimulus moschatus	3/4/1992	1/29/2008	
9150	Myosotis laxa	1/12/2012		
320	Panicum virgatum	6/25/1991		
9531	Physostegia virginiana	5/7/2012		
8287	Pilea fontana	4/14/2010		1/12/2012
5227	Polygonatum biflorum	3/17/1994	3/3/2010	3/3/2010
8028	Prunus pumila var. depressa	4/17/2009		
1096	Schoenoplectus purshianus	3/4/1992		
5412	Silver Maple-Ostrich Fern Riverine Floodplain Forest	2/7/1994		6/5/2012
8507	Stylurus amnicola	5/27/2010		9/7/2010
9151	Symphyotrichum racemosum	1/12/2012		
984	Tillaea aquatica	7/28/1983		
4569	Zannichellia palustris	2/19/1988		

* Title of spreadsheet added to printed copy by SVE

Vermont Natural Heritage Inventory
Vermont Fish and Wildlife Department
Rare Species Around Vermont Yankee
June 2012

EO_ID	SCIENTIFIC	S_PRIMARY_	EO_NUM	S_RANK	FED_STATUS	VT_STATUS	EO_ID	EO_NUM	SURVEY_SIT	LAST_OBS	VT_EO_INFO	INFORMAL_T
4569.000000	Zannichellia palustris	Horned Pondweed	1.000000	S2			4569.000000	1.000000	VERNON DAM SITE	1982		Flowering Plants
4623.000000	Elatine minima	Small Water-wort	1.000000	S1			4623.000000	1.000000	VERNON DAM SITE	1982		Flowering Plants
2258.000000	Juncus acuminatus	Tapering Rush	1.000000	S1			2258.000000	1.000000	VERMONT YANKEE FLATS	1968		Flowering Plants
984.000000	Tillaea aquatica	Pygmyweed	2.000000	S1			984.000000	2.000000	VERNON DAM SITE	1982		Flowering Plants
1011.000000	Eragrostis frankii	Frank's Love-grass	1.000000	S3			1011.000000	1.000000	VERNON DAM SITE	1982		Flowering Plants
1096.000000	Schoenoplectus purshianus	Pursh's Bulrush	2.000000	S3			1096.000000	2.000000	VERNON DAM SITE	1991		Flowering Plants
2925.000000	Eleocharis intermedia	Matted Spikerush	5.000000	S3			2925.000000	5.000000	VERNON DAM SITE	1984		Flowering Plants
320.000000	Panicum virgatum	Switch Grass	3.000000	S3			320.000000	3.000000	VERMONT YANKEE FLATS	1982		Flowering Plants
5392.000000	Equisetum pratense	Meadow Horsetail	29.000000	S3			5392.000000	29.000000	VERNON DAM SITE	1990		Ferns and relatives
5412.000000	Silver Maple-Ostrich Fern Riverine Floodplain Forest		29.000000	S3			5412.000000	29.000000	VERNON DAM SITE	1997		
1809.000000	Mimulus moschatus	Musk Flower	3.000000	S2S3			1809.000000	3.000000	VERNON DAM SITE	1987		Flowering Plants
8028.000000	Prunus pumila var. depressa	Low Sand Cherry	10.000000	S2			8028.000000	10.000000	VERNON DAM SITE	1968		Flowering Plants
5227.000000	Polygonatum biflorum	Common Solomon's-seal	1.000000	S1			5227.000000	1.000000	VERNON DAM SITE	2008		Flowering Plants
8177.000000	Coleataenia longifolia	Redtop Panic-grass	2.000000	S2S3			8177.000000	2.000000	VERNON DAM SITE	1982		Flowering Plants
4034.000000	Hypericum ascyron	Great St. John's-wort	24.000000	S2		T	4034.000000	24.000000	VERNON DAM SITE * VERNON POWERLINE SITE	2010		Flowering Plants
8287.000000	Pilea fontana	Black-seeded Clearweed	1.000000	SH			8287.000000	1.000000	VERMONT YANKEE FLATS	1968		Flowering Plants
8507.000000	Stylurus amnicola	Riverine Clubtail	2.000000	S1			8507.000000	2.000000	VERNON DAM SITE	2005		Odonates
8506.000000	Gomphus vastus	Cobra Clubtail	1.000000	S1			8506.000000	1.000000	VERNON DAM SITE	2005		Odonates
8410.000000	Gomphus abbreviatus	Spine-crowned Clubtail	3.000000	S1S2			8410.000000	3.000000	VERNON DAM SITE	2005		Odonates
9032.000000	Carex foenea	Bronze Sedge	13.000000	S1		E	9032.000000	13.000000	VERNON DAM SITE	1984		Flowering Plants
9149.000000	Lycopus virginicus	Virginia Bugleweed	10.000000	S2			9149.000000	10.000000	VERMONT YANKEE FLATS	1969		Flowering Plants
9150.000000	Myosotis laxa	Smaller Forget-me-not	5.000000	S2			9150.000000	5.000000	VERMONT YANKEE FLATS	1967		Flowering Plants
9151.000000	Symphyotrichum racemosum	Small White Aster	6.000000	S1			9151.000000	6.000000	VERMONT YANKEE FLATS	1968		Flowering Plants
9221.000000	Elatine americana	American Waterwort	1.000000	SH			9221.000000	1.000000	VERNON DAM SITE	1975		Flowering Plants
9531.000000	Physostegia virginiana	Obedient Plant	25.000000	S2		T	9531.000000	25.000000	VERNON DAM SITE	2010		Flowering Plants

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